EXHIBIT A

CURRICULUM VITAE **June, 2008**

Personal data:

Name Bernard Roizman

Work address: The Marjorie B. Kovler Viral Oncology Laboratories, The University of Chicago, 910 East 58th Street Chicago Il. 60637.

Home address: 5555 South Everett Ave, Chicago Il 60637

Education:

Temple University, Philadelphia, Pennsylvania 1949-1954, B.A. 1952; M.S. 1954.

The Johns Hopkins University, Baltimore, Maryland 1954-1956; Sc.D. 1956.

Awards and Honors:

Pasteur Award, Illinois Society of Microbiology, 1972; Esther Langer Award, 1974. Centennial Medal, Institut Pasteur, Paris, France 1987; First annual ICN International Prize in Virology, 1988; Sesquicentennial Gold Medal, University of Ferrara, Italy, 1991; J. Allyn Taylor International Prize in Medicine, 1997; Bristol-Myers Squibb Award for Distinguished Achievement in Infectious Disease Research, 1998; Abbott-ASM Lifetime Achievement Award, 2008.

Elected: Member of the National Academy of Sciences, 1979; Fellow, American Academy of Arts and Sciences, 1991; Fellow, American Academy of Microbiology, 1992; Institute of Medicine, 2001; Fellow, American Association for the Advancement of Science, 2004. Honorary Member, Hungarian Academy of Sciences, 1995, Foreign Member, Chinese Academy of Engineering, 2000.

Honorary degrees: Doctorate in Humane Letters, Governors State University, IL. 1984; Doctorate in Medicine and Surgery. University of Ferrara, Italy 1991; Doctorate in Science, University of Paris, France, 1997, Doctorate in Medicine, Univ. of Valladolid, Spain, 2001; Professor (honoris causa) Shandong Academy of Medical Sciences, China, 1985; Peking Union Medical College, China, 2002, Shandong Univ, 2003; Qingdao Univ. 2003; Jiatong Univ Beijing 2007.

Honorary Fellow, Pan American Cancer Cytology Soc., 1973; Fellow, Japanese Soc. for the Promotion of Science, 1989. Honorary member, Italian Soc. for Virology, 2002.

Outstanding Alumnus in Public Health Award for 1984; Johns Hopkins Univ. Society of Scholars, The Johns Hopkins University, 1988.

Schneierson Visiting Prof., Mount Sinai School of Medicine, New York, N.Y. 1982; Visiting Prof., Univ. of Michigan, 1989; Visiting Prof., Univ. of Bologna, Italy, 1991; Sulkin Visiting Prof. Southwest Med. School 2004; Sackler Fellow, Univ. of Tel Aviv, 1995.

NIH Outstanding Investigator Award 1988-2001; NIH-NCI Merit award, 2003. recipient, Bristol Myers Squibb Unsolicited Research Grant Award in Infectious Diseases, 1991-1995.

Positions Held:

(1). Academic

Medical Institutions, The Johns Hopkins University: Instructor of Microbiology, 1956-1957; Research Associate of Microbiology, 1957-1958; Assistant Prof. of Microbiology, 1958-1965.
Division of Biological Sciences, The University of Chicago:
Associate Professor of Microbiology, 1965-1969; Professor of Microbiology, 1969-1970; Professor of Microbiology and Biophysics, 1970-1981; Joseph Regenstein Professor of Virology in the Departments of Microbiology and Biophysics & Theoretical Biology 1981-1983; Current: **Joseph Regenstein Distinguished Service Professor of Virology in the Departments of Molecular Genetics & Cell Biology, Biochemistry & Molecular Biology, and in Microbiology.**
Chairman, Interdepartmental Committee on Virology, 1969-1985; 1987-2001
Chairman, Department of Molecular Genetics and Cell Biology, 1985-88.

(2) Editorial

Member, Editorial Board of Journal of Hygiene, 1958-1961.
Member, Editorial Board of Journal of Infectious Diseases, 1965-1969.
Member, Editorial Board of Journal of Virology, 1970 –
Member, Editorial Board of Intervirology, 1972-1985.
Advisory Editor for Progress in Surface Membrane Science, 1972
Member, Editorial Board of Archives of Virology, 1975-1981.
Member, Editorial Board of Virology, 1976-1978; 1983-
Member, Editorial Board of Microbiologica, 1978-
Associate Editor, Cell, 1979-1981.
Member, Editorial Advisory Board, Antiviral Agents Bulletin, 1988-2002
Member, Editorial Board, Methods in Molecular Biology, 1988-
Member, Editorial Advisory Board, Encyclopedia of Virology, 1990-
Editor-in-Chief, Infectious Agents and Disease, 1991-1996
Member, Editorial Board of Gene Therapy, 1994-
Member, Editorial Board, J. of Human Virology 1997-2001
Member, Editorial Board, Encyclopedia of Molecular Medicine, Wiley, 2001
Member, Editorial Board, J. of Virological Methods 1999-
Member, Editorial Board of Acta Pathologic, Microbiologica, et Immunologica Scandinavica 2004-
Member, Board of Editors, Mt. Sinai Journal of Medicine.

(3) Consultantships, Memberships on National Committees, etc.

A) Grant Review Panels

Member, Special virus Cancer Program, Developmental Research Working Group, National Cancer Institute, National Institutes of Health, 1967-1971.
Consultant, National Cancer Institute, N.I.H. 1967-1973.
Member, Steering Committee, Human Cell Program, Cell Biology Division, National Science Foundation, 1971-1974.
Member, the American Cancer Society Advisory Committee on Cell Biol. and Virol., 1970-74.
Consultant, National Science Foundation, 1972-1974.
Member, Medical Advisory Board of the Leukemia Research Foundation, 1972-1977.
Member, Experimental Virology Study Section, Research Grants Review Branch, National Institutes of Health, 1976-1980.

B) International Organizations

Member, Herpesvirus Study Group, International Committee for the Taxonomy of Viruses, 1971- Chairman, 1971 - 1993
Member, WHO/FOA Herpesvirus Work–ng Team, 1972-1981.
Member, International Microbial Genetics Commission, International Association of Microbiological Societies, 1979-1986.
Member, Subcommittee on Vertebrate Viruses, International Committee for the Taxonomy of Viruses, 1981- Chairman, Scientific Advisory Board, Showa University Research Institute for Biomedicine in Florida, 1983- ; Member, 1991- and Chairman, Board of Directors, 1991-1997.

C) National Organizations

Member, Scientific Advisory Council, New York Cancer Institute, 1971-89.
Member, External Advisory Committee, Emory University Cancer Center, 1973-81
Member, Board of Scientific Consultants, Sloan Kettering Institute, 1975-81.
Member, N.I.A.I.D. Task Force on Virology, 1976-1977.
Member, Board of Trustees, Goodwin Institute for Cancer Research, 1977-

Member, External Advisory Board, Northwestern Univ. Cancer Center,1979-88.
Member, National Institute of Medicine, Committee for Establishing Vaccine 1983-1985.
Member, Briefing Panel on Prevention and Treatment of Viral Diseases, Office of President's Science Advisor, 1986.
Chairman, Bristol-Myers Squibb Infectious Disease Award Committee, 1991-1995
Member, N.I.A.I.D. Blue Ribbon Panel on Bioterrorism and its implications for Biomedical Research, 2002.
Member, External Scientific Advisory Board, Malaria Research Institute, Johns Hopkins University School of Public Health, 2002-

D. Industrial Organizations
Consultant, Abbott laboratories, 1987-2000;
Avid Tech. 1992-1995; ENI, Italy 1987-1991;
Institut Merieux, Lyon France 1979-1991;
Genta, Inc. 1987-1993;
Lederle Laboratories, 1988-1992;
Schering Plough Research Institute 1988-1997;
Searle 1993-1994;
Syntro Corp. 1981-1986;
Medigene AG (Formerly Neurovir) 1995-
Co-Founder, consultant, member of the Board of Directors - Aviron Inc. 1992-2002.
Consultant Nurel 2004-2005

E) Organization of Scientific Meetings
Convener, *The 1st International Workshop on Herpesviru[s]es*, Cold Spring Harbor, N.Y., 1972.
Lecturer, American Foundation for Microbiology, 1974-1975.
Vice Chairman, Program Committee 3rd International Congress on Virology, Madrid, Spain, 1975.
Member, International Organizing Committee, Sixth Pan American Cancer Cytology Congress, 1978.
Co-Director, *Seminars on Advances in Cancer Biology* (Cancer Virology), Aspen, Colorado, 1977.
Co-Chairman, *New York Academy of Sciences Conference on Genetic Variation*, York, N.Y., 1979.
Co-Organizer, *International Workshop on Herpesviruses*, Bologna, Italy, 1981.
Co-Organizer, *International Conference on Immunobiology and Prophylaxis of Herpesvirus Infections*, Ft. Lauderdale, Florida, 1983, 1985; Marco's Island 1987; Fukuoka, Japan, 1989; S'. Petersburg, 1991; 1995; Hokkaido, Japan, 1993; Tampa Fl, 1995, Mishima Japan, 1997, Il Ciocco, Pisa, 1999, Osaka Japan, 2001, Taormina Italy 2003, Osaka Japan, 2005, Orvieto Italy, 2007.
Organizer, *Banburry Conference on Viral Latency*; Cold Spring Harbor, 1992.
Co-Organizer, *First Japan Workshop on Herpesviruses*, Osaka Japan, 1992.
Co-Organizer, *IRBM Symposium on Molecular Biology of Viral Latency*, Rome Italy, 1992.
Co-Organizer, UCLA Symposium on *Molecular Biology of Human Viral Pathogens*, 1993.
Organizer, Colloquium on *The effects of changes In human ecology and behavior on human infectious diseases*. National Academy of Sciences, September 1993.
Co-Organizer, Symposium on *Current Frontiers in Virology*, Chicago Il, May 1994.
Co-Organizer, *International Workshop on Herpesviruses*, DeKalb, Il, July, 1996.
Co-Organizer, National Academy of Sciences colloquium on *Genetic Engineering of Viruses and of Virus Vectors*, Irvine, CA, June 1996
Co-organizer, *Keystone Symposium on Molecular Approaches to Human Viral Vaccines*. Snowbird, Utah, 1999.

Fellowships:
Lederle Medical Faculty Award, 1960-1961; Scholar in Cancer Research of the American Cancer Society at

Institut Pasteur (with Andre Lwoff) Paris, France, 1961-1962; U.S.P.H.S. Career Development Award, 1963-1965; Faculty Research Associate, American Cancer Society, 1966-1971; Travelling Fellow, International Agency for Research Against Cancer (with Dr. George Klein, Karolinska Institutet, Stockholm, Sweden), 1970

Memberships in Scientific Societies:
American Association of Immunologists, American Society for Microbiology, American Society for Biochemistry and Molecular Biology, British Society for General Microbiology, American Society for Virology, International Society for Antiviral Research.

Table of Contents

Publications (Articles only; no abstracts)

1. Robinson, L.B., Wichelhausen, R.H. and Roizman, B. Contamination of human cell cultures by pleuropneumonia-like organisms. Science **124**: 1147-1148, 1956.

2. Mayer, M.M., Rapp, H.J., Roizman, B., Klein, S.W., Cowan, K.M., Lukens, D., Schwerdt, C.E., Schaffer, F.L. and Charney, L. The purification of poliomyelitis virus as studied by complement fixation. J. Immunol. **78**:435-455, 1957.

3. Chanock, R., Roizman, B. and Myers, R. Recovery from infants with respiratory illness of a virus related to chimpanzee coryza agent (CCA). I. Isolation, properties and characterization. Am. J. Hyg. **66**: 281-290, 1957.

4. Forsyth, P.J. and Roizman, B. Concentration and partial purification of adenovirus type 2 complement-fixing antigen. Virology **5**:393-394, 1958.

5. Roizman, B., Hopken, W. and Mayer, M.M. Immunochemical studies of poliovirus. II. Kinetics of the formation of infectious and non infectious type I poliovirus in three cell strains of human derivation. J. Immunol. **80**:386-395, 1958.

6. Roizman, B., Mayer, M.M. and Rapp, H.J. Immunochemical studies of poliovirus. III. Further studies on the immunologic and physical properties of poliovirus particles produced in tissue culture. J. Immunol. **81**:419-425, 1958.

7. Rowe, W.P., Hartley, J.W., Roizman, B. and Levy, H.B. Characterization of a factor formed in the course of adenovirus infection of tissue cultures causing detachment of cells from glass. J. Exp. Med. **108**:713-729, 1958.

8. Roizman, B., Mayer, M.M. and Roane, P.R., Jr. Immunochemical studies of poliovirus. IV. Alteration of the immunologic specificity of purified poliovirus by heat and ultraviolet light. J. Immunol. **82**:19- 25, 1959.

9. Hoggan, M.D. and Roizman, B. The effect of temperature of incubation on the formation and release of herpes simplex virus in infected FL cells. Virology **8**:508-524, 1959.

10. Hoggan, M.D. and Roizman, B. The isolation and properties of a variant of herpes simplex producing multinucleated giant cells in monolayer cultures in the presence of antibody. Am. J. Hyg. **70**:208- 219, 1959.

11. Roizman, B. Preparation of high potency poliovirus in FL cell cultures at room temperature. Proc. Soc. Exp. Biol. and Med. **101**:410-411, 1959.

12. Hoggan, M.D., Roizman, B. and Turner, T.B. The effect of temperature of incubation on the spread of herpes simplex virus in an immune environment in cell culture. J. Immunol. **84**:152-159, 1960.

13. Roizman, B., Hoggan, M.D. and Cornfield, J. Linear and parabolic estimates of the titers of herpes simplex from pock counts on the chorioallantoic membrane of embryonated eggs. Virology **11**:572-589, 1960.

14. Roizman, B. and Roane, P.R., Jr. Studies of polyoma virus. I. Hemagglutination as a measure of virus mass and antibody to the virus. J. Immnol. **85**:418-428, 1960.

15. Roizman, B. Roane, P.R., Jr and Robinson V.L. Studies of polyoma virus. II. Characteristics of tumor production, antibody response, and recovery of virus from tumors in the Syrian hamster. J. Immunol. **85**:429-438, 1960.

16. Roizman, B. and Turner, T.B. Influence of antibodies and temperature on the course of virus infection of cells in tissue culture. Problems of Virology **5**:548-560, 1960.

17. Roizman, B. and Roane, P.R., Jr. Polyoma virus in Syrian hamsters: a noncommunicable infection. Nature **188**:1134, 1960.

18. Romanul, F.C.A., Roizman, B. and Luttrell, C.N. Studies of polyoma virus pathology and distribution of tumors produced in Syrian hamsters following intracranial or subcutaneous inoculation. Bull. Johns Hopkins Hosp. **108**:1-15, 1961.

19. Hoggan, M.D., Roizman, B. and Roane, P.R., Jr. Further studies of variants of herpes simplex virus that produce syncytia or pock-like lesions in cell cultures. Am. J. Epidemiology (ex Hyg). **73**:114-122, 1961.

20. Roizman, B. Virus infection of cells in mitosis. I. Observations on the recruitment on the site of virus antigen formation. Virology **13**: 387-401, 1961.

21. Roizman, B. and Schluederberg, A.E. Virus infection of cells in mitosis. II. Measles virus infection of mitotic HEp-2 cells. Proc. Soc. Exp. Biol. and med. **106**:320-323, 1961.

22. Roizman, B. and Roane, P.R., Jr. A physical difference between two strains of herpes simplex virus apparent on sedimentation in cesium chloride. Virology **15**:75-79, 1961.

23. O'Donovan, C. and Roizman, B. Different'ation of the process of cell infection with free herpes simplex virus from the recruitment of cells into virus-induced syncytia in x-rayed cell cultures. Virology **15**:374-376, 1961.

24. Schluederberg, A.E. and Roizman, B. Separation of multiple antigenic components of Measles virus by equilibrium sedimentation in cesium chloride. Virology **16**:80-83, 1962.

25. Roizman, B. and Roane, P.R., Jr. Studies on the determinant antigens of viable cells. I. A method, and its application in tissue culture studies, for enumeration of killed cells, based on the failure of virus multiplication following injury by cytotoxic antibody and complement. J. Immunol. **87**:714-727, 1961.

26. Prudovsky, S., Luttrell, C.N. and Roizman, B. Encephalomyelitis and pneumonitis in hamsters infected with newcastle disease virus by different ro ristetraoc. Soc. Exp. Biol. and Med. **107**:656-659, 1961.

27. Roizman, B. and Schluederberg, A.E. Virus infection of cells in mitosis. III. Cytology of mitotic and amitotic HEp-2 cells infected with measles virus. J. Nat. Cancer Inst. **28**:35-53, 1962.

28. Roizman, B. Polykaryocytosis induced by viruses. Proc. Nat. Acad. Sci. (USA) **48**:228-234, 1962.

29. Roizman, B. Effet de l'infection par mycobacterium tuberculos's sur la polykaryocytose induite par le virus de l'Herpes. C. R. Acad. Sci. Paris. **254**:1'50-1352, 1962.

30. Lwoff, A., Roizman, B. and Lwoff, M. Definition d'un evenement critique thermosensible d'ns le cycle du poliovirus. C.R. Acad. Sci. Paris. **254**:2462-2464, 1962.

31. Roizman, B. The role of hormones in viral infections. I. Suppression of viral adsorption and penetration into cells treated with parathyroid hormone in vitro. Proc. Nat. Acad. Sci. (USA) **48**:795-803, 1962.

32. Roizman, B. The role of hormones in viral infections. II. Acceleration of viral adsorption and penetration into cells treated with thyroid hormone in vitro. Proc. Nat. Acad. Sci. (USA) **48**:973-977, 1962.

33. Roizman, B. Polykaryocytosis. Cold Spring Harbor Symp. on Quant. Biol. **27**:327-340, 1962.

34. Roizman, B. and Roane, P.R., Jr. Demonstration of a surface difference between virions of two strains of herpes simplex virus. Virology **19**:198-204, 1963.

35. Roizman, B. The programming of herpesvirus multiplication in doubly-infected and in puromycin-treated cells. Proc. Nat. Acad. Sci. (USA) **49**:165-171, 1963.

36. Roizman, B. Reversible inhibition of herpes simplex multiplication in HEp-2 cells with phenethyl alcohol. Virology **19**:580-582, 1963.

37. Roizman, B. Intracellular localization of viruses by fluorescence microscopy. Zeiss Werkzeitschriftr **45**, 1963.

38. Roizman, B. The programming of Herpesvirus multiplication in mammalian cells. In: ***Viruses, nucleic acids, and cancer***, Proc. of the 17th Annual Symp., M.D. Anderson Hospital and Tumor Institute, Baltimore, MD. William Wilkins and Co., pp. 205-223, 1963.

39. Roizman, B., Aurelian, L. and Roane, P.R., Jr. The multiplication of herpes simplex virus. I. The programming of viral DNA duplication in HEp-2 cells. Virology **21**:482-498, 1963.

40. Roane, P.R., Jr. and Roizman, B. Studies of the determinant antigens of viable cells. II. Demonstration of altered antigenic reactivity of HEp-2 cells infected with herpes simplex virus. Virology **22**:1-8, 1964.

41. Roizman, B. and Roane, P.R., Jr. Multiplication of herpes simplex virus. II. The relation between protein synthesis and the duplication of viral DNA in infected HEp-2 cells. Virology **22**:262-269, 1964.

42. Aurelian, L. and Roizman, B. The host range of herpes simplex virus. Interferon viral DNA, and antigen synthesis in abortive infection of dog kidney cells. Virology **22**:452-461, 1964.

43. Roane, P.R., Jr. and Roizman, B. Requirement for continuous protein synthesis for thedevelopment of resistance to UV light in HEp-2 cells infected with herpes simplex virus. Biochem. Biophys. Acta. **91**:168-170, 1964.

44. Roizman, B. and Aurelian, L. Abortive infection of canine cells by herpes simplex virus. I. Characterization of viral progeny from cooperative infection with multiply in canine cells. J. Mol. Biol. **11**:528-538, 1965.

45. Aurelian, L. and Roizman, B. Abortive infection of canine cells by herpes simplex virus. II. The alternative suppression of synthesis of interferon and viral constituents. J. Mol. Biol. **11**:539-548, 1965.

46. Borman, G.S. and Roizman, B. The inhibition of herpes simplex virus multiplication by nucleosides. Biochem. Biophys. Acta. **103**:50-59, 1965.

47. Roizman, B., Borman, G.S. and Kamali-Rousta, M. Macromolecular synthesis in cells infected with herpes simplex virus. Nature **206**:1374-1375, 1965.

48. Roizman, B. An inquiry into the mechanisms of recurrent herpes infection of man. In: ***Perspectives in Virology IV*** M. Pollard, Ed. Harper-Row Publ., Hoeber Med. Div. N.Y., pp. 283-304, 1966.

49. Roizman, B. Extracellular pH and herpes simplex virus multiplication. Proc. Soc. Exp. Biol. and Med. **119**:1021-1023, 1965.

50. Roizman, B. Abortive infection of canine cells by herpes simplex virus. III. The interference of conditional lethal virus with an extended host range mutant. Virology **27**:113-117, 1965.

51. Roizman, B. Studies of an abortive infection of animal cells. In: ***Proc. of the Int. Symposium on Comparative Leukemia Research*** held in Stockholm, Sweden. Pergamon Press, Oxford, England, pp. 73-76, 1966.

52. Sydiskis, R.J. and Roizman, B. Polysomes and protein synthesis in cells infected with a DNA virus. Science **153**:76-78, 1966.

53. Roane, P.E., Jr. and Roizman, B. Differentiation of nuclear and cytoplasmic herpesvirus antigens in infected cells. Virology **29**:668-670, 1966.

54. Morris, V.L., Spear, P.G. and Roizman, B. Some biophysical properties of frog viruses and their DNA. Proc. Nat. Acad. Sci. (USA) **56:**1155-1157, 1967.

55. Spear, P.G. and Roizman, B. Buoyant density of herpes simplex virus in solutions of caesium chloride. Nature **214**:713-714, 1967.

56. Roizman, B., Spring, S.B. and Roane, P.R., Jr. Cellular compartmentalization of herpesvirus antigens during viral replication. J. Virol. **1**:181-192, 1967.

57. Morris, V.L. and Roizman, B. Localization of frog virus multiplication in chick embryo cells by immunofluorescence. Proc. Soc. Exp. Biol. and Med. **124**:507-510, 1967.

58. Spring, S.B. and Roizman, B. Herpes simplex virus products in productive and abortive infection. I. Stabilization with formaldehyde and preliminary analyses by isopycnic centrifugation in CsCl. J. Virol. **1**:295-301, 1967.

59. Roizman, B. and Spring, S.B. Alteration in immunologic specificity of cells infected with cytolytic viruses. ***Proceedings of the Conference on Cross Reacting Antigens***. Edited by J.J. Trentin, The Williams and Wilkins Co., Baltimore, pp. 85-96, 1967.

60. Sydiskis, R.J. and Roizman, B. The disaggregation of host polyribosomes in productive and abortive infection with herpes simplex virus. Virology **32**:678-686, 1968.

61. Roizman, B. and Spear, P.G. Preparation of herpes simplex virus of high titer. J. Virol. **2**:83-84, 1968.

62. Ejercito, P.M., Kieff, E.D. and Roizman, B. Characterization of herpes simplex virus strains differing in their effect on social behavior of infected cells. J. Gen. Virol. **2**:357-364, 1968.

63. Sydiskis, R.J. and Roizman, B. The sedimentation profiles of cytoplasmic polyribosomes in mammalian cells productively and abortively infected with herpes simplex virus. Virology **34**:562-565, 1968.

64. Spring, S.B., Roizman, B. and Schwartz, J. Herpes simplex virus products in productive and abortive infection. II. Electron microscopic and immunological evidence for failure of virus envelopment as a cause of abortive infection. J. Virol. **2**:384-392, 1968.

65. Spear, P.G. and Roizman, B. An improved procedure for H^3 and C^{14} counting in acrylamide gels with a nonaqueous scintillation system. Anal. Biochem. **26**:197-200, 1968.

66. Spear, P.G. and Roizman, B. The proteins specified by herpes simplex virus. I. Time of synthesis, transfer into nuclei, and properties of proteins made in productively infected cells. Virology **36**:545-555, 1968.

67. Wagner, E.K. and Roizman, B. Effect of the vinca alkaloids on RNA synthesis in human cells in vitro. Science **162**:569-570, 1968.

68. Spring, S.B. and Roizman, B. Herpes simplex virus products in productive and abortive infection. III. Differentiation of infectious virus derived from nucleus and cytoplasm with respect to stability and size. J. Virol. **2**:979-985, 1968.

69. Roizman, B. Herpesviruses. In: ***The Biochemistry of Viruses.*** Edited by H.B. Levy, Marcel Dekker, Inc., New York, pp. 415-482, 1969.

70. Roizman, B. Herpes simplex viruses and human cancer: Current status of the problem. ***Symposium on Biology of Amphibian Viruses***. Springer-Verlag, New York, pp. 478-481, 1969.

71. Roizman, B. and Spear, P.G. Macromolecular biosynthesis in animal cells infected with cytolytic viruses. In: ***Current Topics in Developmental Biology IV.*** Edited by A. Monroy and A.A. Moscona, Academic Press, New York, pp. 79-108, 1969.

72. Schwartz, J. and Roizman, B. Concerning the egress of herpes simplex virus from infected cells: Electron and light microscope observations. Virology **38**:42-49, 1969.

73. Roizman, B. The herpesviruses - a biochemical definition of the group. In: Current Topics in Microbiology and Immunology **49**:1-79, Springer-Verlag, Heidelberg, 1969.

74. Wagner, E.K. and Roizman, B. RNA synthesis in cells infected with herpes simplex virus. I. The patterns of RNA synthesis in productively infected cells. J. Virol. **4**:36-46, 1969.

75. Spring, S.B., Roizman, B. and Spear, P.G. Selective failure of protein synthesis in herpesvirus-infected cells deprived of arginine. Virology **38**:710-712, 1969.

76. Roizman, B., Spring, S.B. and Schwartz, J. The herpesvirion and its precursors made in productively and

in abortively infected cells. ***Symposium on Viral Defectiveness***. Fed. Proc. 28:1890-1898, 1969.

77. Wagner, E.K. and Roizman, B. RNA synthesis in cells infected with herpes simplex virus. II. Evidence that a class of viral mRNA is derived from a high molecular weight precursor synthesized in the nucleus. Proc. Nat. Acad. Sci. (USA) 64:626-633, 1969.

78. Schwartz, J. and Roizman, B. Similarities and differences in the development of laboratory strains and freshly isolated strains of herpes simplex virus in HEp-2 cells: Electron microscopy. J. Virol. **4**:879-889, 1969.

79. Lee, L., Roizman, B., Spear, P.G., Kieff, E.D., Burmester, B.R. and Nazerian, K. Marek's disease herpesvirus: A cytomegalovirus? Proc. Nat. Acad. Sci. (USA) **64**:952-956, 1969.

80. Terni, M. and Roizman, B. Variability of herpes simplex virus: Isolation of two variants from simultaneous eruptions at different sites. J. Infect. Dis. **121**:212-216, 1970.

81. Morris, V.L., Wagner, E.K. and Roizman, B. RNA synthesis in cells infected with herpes simplex virus. III. Absence of virus-specified arginyl- and seryl- tRNA in infected HEp-2 cells. J. Mol. Biol. **52**:247-263, 1970.

82. Spear, P.G., Keller, J.M. and Roizman, B. The proteins specified by herpes simplex virus. II. Viral glycoproteins associated with cellular membranes. J. Virol. **5**:123-131, 1970.

83. Roizman, B. Herpesviruses, membranes and the social behavior of infected cells. In: ***Proceedings of the 3rd International Symposium on Applied ard Medical Virology***, Warren Green Publishers, St. Louis, pp. 37-72, 1970.

84. Keller, J.M., Spear, P.G. and Roizman, B. Proteins specified by herpes simplex virus III. Viruses differing in their effects on the social behavior of infected cells specify different membrane glycoproteins. Proc. Nat. Acad. Sci. (USA) **65**:865-871, 1970.

85. Roizman, B., Keller, J.M., Spear, P.G., Terni, M., Nahmias, A. and Dowdle, W. Variability, structural glycoproteins, and classification of herpes simplex viruses. Nature **227**:1253-1254, 1970.

86. Spear, P.G. and Roizman, B. Proteins specified by herpes simplex virus. IV. Site of glycosylation and accumulation of viral membrane proteins. Proc. Nat. Acad. Sci. (USA) **66**:730-737, 1970.

87. Wagner, E.K., Roizman, B., Savage, T., Spear, P.G., Mizell, M., Durr, F.E. and Sypowicz, D. Characterization of the DNA of herpesviruses associated with Lucke adenocarcinoma of the frog and Burkitt lymphoma of man. Virology **42**:257-261, 1970.

88. Roizman, B., Bachenheimer, S.B., Wagner, E.K. and Savage, T. Synthesis and transport of RNA in herpesvirus-infected mammalian cells. Cold Spring Harbor Symp. Quant. Biol. **35**:753-771, 1970.

89. Roizman, B. and Spear, P.G. Herpesvirus antigens on cell membranes detected by centrifugation of membrane-antibody complexes. Science **171**:298-300, 1971.

90. Roizman, B. and Spear, P.G. The role of herpesvirus glycoproteins in the modification of membranes of infected cells. Proc. of the Miami Winter Symposia, Jan. 18-22, 1971. In: ***Nucleic Acid-Protein***

interactions and Nucleic Acid Synthesis in Viral Infection. Edited by D.W. Ribbons, J.F.Woessner, and J. Schultz, North Holland Publishing Co. Amsterdam/London, 2:435-455, 1971.

91. Lee, L., Kieff, E.D., Bachenheimer, S.L., Roizman, B., Spear, P.G., Burmester, B.R. and Nazerian, K. Size and composition of Marek's disease virus DNA. J. Virol. **7**:289-'94, 1971.

92. Roizman, B. and Spear, P.G. Herpesviruses: Current information on the composition and structure. In: ***Comparative Virology***. Edited by K. Maramorosch and E. Kurstak, Academic Press, pp. 135-168, 1971.

93. Roizman, B. Biochemical features of herpesvirus-infected cells. ***Proc. of the First International Symposium of the Princess Takamatsu Research Fund.*** Nov. 24-26, 1970. Edited by K. Nishioka, Tokyo, Japan, pp. 97-126, 1971.

94. Roizman, B. Herpesviruses, man and cancer or the persistence of the viruses of love. In: ***Of Microbes and Life.*** Edited by Monod and Borek, Columbia University Press, New York, pp. 189-214, 1971.

95. Kieff, E.D., Bachenheimer, S.L. and Roizman, B. Size, composition and structure of the DNA of herpes simplex virus subtypes 1 and 2. J. Virol. **8**:125-132, 1971. Reprinted in Herpesvirus III, Mss Information, New York, 1971.

Reprinted in ***Vero Cells - Origin, Properties and Biomedical App–ications***, Edited by Bunsitu Simuzu and Toyozo Terasima, School of Medicine, Chiba University, Chiba, Japan, 1988.

96. Roizman, B. The biology of herpesviruses. Giorn. Mal. Infet. Para. **23**:421-432, 1971.

97. Roizman, B. The modification of immunologic specificity and function of cellular membranes by herpesviruses. ***Proc. of the International Symposium on the Relationship between Tumor Antigens and the Histocompatibility Systems***. Paris, France, Trans. Proc. **3**:1179-1183, 1971.

98. Roizman, B. Biochemical features of herpesvirus-infected cells, particularly as they relate to cancer. Atti. Acad. Sci. Ferrara, Italy. **47**:1-3, 1970-71.

99. Frenkel, N. and Roizman, B. Herpes simplex virus: Genome size and redundancy studied by renaturation kinetics. J. Virol. **8**:591-593, 1971.

100. Gibson, W. and Roizman, B. Compartmentalization of spermine and spermidine in the herpes simplex virion. Proc. Nat. Acad. Sci. (USA) **68**:2818-2821, 1971.

101. Roizman, B. The biochemical features of herpesvirus-infected cells, particularly as they relate to their potential oncogenicity - A review. In: ***Oncogenesis and Herpes–iruses***. Edited by P.M. Biggs, G.de The and L.N. Payne, International Agency for Research on Cancer, Lyon, France, pp. 1-21, 1972.

102. Bachenheimer, S.L., Kieff, E.D., Lee, L. and Roizman, B. Comparative studies of DNAs of Marek's disease and herpes simplex viruses. 'In: ***Oncogenesis and Herpesviruses***. Edited by P.M. Biggs, G. de The and L.N. Payne, International Agency for Research on Cancer, Lyon, France, pp. 74-81, 1972.

103. Spear, P.G. and Roizman, B. Proteins specified by herpes simplex virus. V. Purification and structural proteins of the herpesvirion. J. Virol. **9**:143-159, 1972.

104. Heine, J.W., Spear, P.G. and Roizman, B. Proteins specified by herpes simplex virus. VI. Viral proteins in the plasma membrane. J. Virol. **9**:431-439, 1972.

105. Savage, T., Roizman, B. and Heine, J.W. Immunological specificity of the glycoproteins of herpes simplex virus of subtypes 1 and 2. J. Gen. Virol. **17**:31-48,1972.

106. Roizman, B., Spear, P.G. and Kieff, E.D. Herpes simplex virus I and II: A biological definition. In: ***Perspectives in Virology VIII***. Edited by M. Pollard, Academic Press, New York, pp. 129-169, 1972.
107. Roizman, B. and Heine, J.W. Modification of human cell membranes by herpes viruses. ***Proc. Of the First California Membrane Conference***. Edited by C.F. Fox, Academic Press, pp. 203-237, 1972.

108. Roizman, B. and de The, G. Nomenclature and classification of herpesviruses: A proposal. WHO Bulletin **46**:547-551, 1972.

109. Frenkel, N. and Roizman, B. Separation of the herpesvirus DNA duplex into unique fragments and intact strand on sedimentation in alkaline gradients. J. Virol. **10**:565- 572, 1972.

110. Frenkel, N. and Roizman, B. Ribonucleic acid synthesis in cells infected with herpes simplex virus. V. Controls of transcription and of RNA abundance. Proc. Nat. Acad. Sci. (USA) **69**:2654-2658, 1972.

111. Kieff, E.D., Hoyer, B., Bachenheimer, S.L. and Roizman, B. Genetic relatedness of type 1 and type 2 herpes simplex viruses. J. Virol. **10**:738-745, 1972.

112. Gibson, W. and Roizman, B. Proteins specified by herpes simplex virus. VIII. Characterization and composition of multiple capsid forms of subtypes 1 and 2. J. Virol. **10**:1044-1052, 1972.

113. Bachenheimer, S.L. and Roizman, B. Ribonucleic acid synthesis in cells infected with herpes simplex virus. VI. Poly A sequences in viral mRN. J. Virol. **10**:875-879, 1972.

114. Furlong, D., Swift, H. and Roizman, B. The arrangement of herpesvirus DNA in the core. J. Virol. **10**:1071-1074, 1972.

115. Frenkel, N., Roizman, B., Cassai, E. and Nahmias, A. A DNA fragment of herpes simplex 2 and its transcription in human cervical cancer tissue. Proc. Nat. Acad. Sci. (USA) 69:3784-3789, 1972.

116. Roizman, B. and Spear, P.G. Herpesviruses. In: ***Atlas of Viruses***. Edited by Dalton and Haguenau, Academic Press, New York, pp. 79-86, 1972.

117. Gibson, W. and Roizman, B. The structural and metabolic involvement of polyamines with herpes simplex virus. In: ***Polyamines in Normal and Neoplastic Growth***. Edited by D.H. Russell, Raven Press, New York, pp.123-135, 1973.

118. Roizman, B. and Frenkel, N. The transcription and state of herpes simplex virus DNA in a human cervical tumor: A comparison with productive infection of human cells. ***Proc. Of the Fourth Lepetitt Colloquium***, Cocoyoc, Mexico. North-Holland Publishing Co., pp. 202-217, 1973.

119. Heine, J.W. and Roizman, B. Proteins specified by herpes simplex virus. IX. Contiguity of host and viral proteins in the plasma membrane of infected cells. J. Virol. **11**:810-813, 1973.

120. Roizman, B. and Frenkel, N. The transcription and state of herpes simplex virus DNA in productive infection and in human cervical cancer in Cervical Carcinoma and Herpesviruses. Cancer Research. **33**:1402- 1416, 1973.

121. Frenkel, N., Silverstein, S., Cassai, E. and Roizman, B. RNA synthesis in cells infected with herpes simplex virus. VII. Control of transcription and of transcript abundancies of unique and common sequences of herpes simplex virus 1 and 2. J. Virol. **11**:886-892, 1973.

122. Nahmias, A.J. and Roizman, B. Infection with herpes-simplex viruses 1 and 2. New Eng. J. of Med. **289**:667-674, 719-725, 781- 789, 1973.

123. Silverstein, S., Bachenheimer, S.L., Frenkel, N. and Roizman, B. Relationship between post-transcriptional adenylation of herpes virus RNA and mRNA abundance. (Paper No. 8 in the series on RNA synthesis in cells infected with herpes simplex virus). Proc. Nat. Acad. Sci. (USA) **70**:2101-2104, 1973.

124. Honess, R.W. and Roizman, B. Proteins specified by herpes simplex virus. XI. Identification and relative molar rates of synthesis of structural and non-structura herpesvirus polypeptides in the infected cell. J. Virol. **12**:1346-1365, 1973.

125. Roizman, B. Herpesviruses. In: ***The Molecular Biology of Tumor Viruses.*** Edited by J. Tooze, Cold Spring Harbor Laboratory, pp. 470-501, 1973.

126. Roizman, B., Bartha, A., Biggs, P.M., Carmichael, L.E., Granoff, A., Hampar, B., Kaplan, A.S., Melendez, L.V., Munk, K., Nahmias, A., Plummer, G., Rajcani, J., Rapp, F., Terni, M., de The, G., Watson, D.H. and Wildy, P. ***Provisional labels for herpesviruses***. J. Gen. Virol. **20**:417-419, 1973.

127. Roizman, B. and Frenkel, N. Herpesvirus DNA: Structure, synthesis, and transcription. In: ***Molecular Studies in Viral Neoplasia.*** Proc. Of the 25th Annual Symp. On Fundamental Cancer Res. Of the M.D. Anderson Hospital and Tumor Inst., The William and Wilkins Co. pp 364-396, 1974.

128. Gibson, W. and Roizman, B. Proteins specified by herpes simplex virus. X. Straining and radiolabeling properties of B-capsid and virion proteins in polyacrylamide gels. J. Virol. **13**:155-165, 1974.

129. Roizman, B. and Furlong, D. The replication of herpesviruses. In: ***Comprehensive Virology.*** Edited by H. Fraenkel-Conrat and R.R. Wagner, Vol. 3, Plenum Press, New York, pp. 229-403, 1974.

130. Roizman, B. Herpesviruses, latency and cancer: A biochemical approach. Reticuloendothelial Society Journal, pp. 312-321, 1974.

131. Honess, R.W. and Roizman, B. The regulation of herpes simplex virus protein synthesis. In: ***The Mechanisms of Virus Diseases.*** Edited by W.S. Robinson and C.F. Fox, W.A. Benjamin Inc., Menlo Park, CA., pp. 455-492, 1974.

132. Honess, R.W. and Roizman, B. Regulation of herpesvirus macromolecular synthesis. I. Cascade regulation of the synthesis of three groups of viral proteins. J. Virol. **14**:8-19, 1974.

133. Heine, J.W., Honess, R.W., Cassai, E. and Roizman, B. Proteins specified by herpes simplex virus. XII. The virion polypeptides of type 1 strains. J. Virol. **14**:640-651, 1974.

134. Roizman, B., Kozak, M., Honess, R.W. and Hayward, G. Regulation of herpesvirus macromolecular synthesis: Evidence for multilevel regulation of herpes simplex 1 RNA and protein synthesis. Cold Spring Harbor Symp. Quant. Biol. **39**:687-702, 1975.

135. Kozak, M. and Roizman, B. Regulation of herpesvirus macromolecular synthesis: Nuclear retention of nontranslated viral RNA sequences. Proc. Nat. Acad. Sci. (USA) **71**:4322-4326, 1974.

136. Huang, A.S., Palma, E.L., Hewlett, N. and Roizman, B. Pseudotype formation between enveloped RNA and DNA viruses. Nature **252**:743-745, 1974.

137. Roizman, B., Hayward, G., Jacob, R., Wadsworth, S.W. and Honess, R.W. Human herpesvirus. I. A model for molecular organization of herpesvirus virions and their DNA. In: ***Chemical and Viral Carcinogenesis*** Vol. 2. Excerpta Medica, International Congress Series No. 350, pp. 188-198, 1974.

138. Roizman, B. and Kieff, E.D. Herpes simplex and Epstein-Barr viruses in human cells and tissues: A study in contrasts. In: ***Cancer: A Comprehensive Treatise*** Vol. 2. Edited by F.F. Becker, Plenum Press, New York, 2:241-322, 1975.

139. Roizman, B. Herpes simplex virus: Aspects of structure and regulation of viral RNA and protein synthesis. In: ***Proc. Nato Tumor Virus Institute*** Edited by A. Kolber, Plenum Press, New York, 1973. pp. 355-395, 1975.

140. Roizman, B., Hayward, G., Jacob, R., Wadsworth, S.W., Frenkel, N., Honess, R.W. and Kozak, M. Human herpesvirus I: A model for molecular organization and regulation of herpesviruses. A review. In: ***Herpesviruses and Oncogenesis***. Edited by H. zur Hausen, G. de The and M.A. Epstein, Nurenberg, Oct. 14-16, 1974, I.A.R.C., Lyon, pp. 3-38, 1975.

141. Jacquemont, B. and Roizman, B. RNA synthesis in cells infected with herpes simplex virus: Analysis of high molecular weight and symmetric viral transcripts in herpesvirus infected cells. In: ***Herpesviruses and Oncogenesis***. Edited by H. zur Hausen, G. de The and M.A. Epstein, Nurenberg, I.A.R.C., Lyon, pp. 39-48, 1975.

142. Kozak, M. and Roizman, B. RNA synthesis in cells infected with herpes simplex virus. IX. Evidence for accumulation of abundant symmetric transcripts in nuclei. J. Virol. **15**:36-40, 1975.

143. Jacquemont, B. and Roizman, B. Ribonucleic acid synthesis in cells infected with herpes simplex virus. X. Properties of viral symmetric transcripts and double-stranded RNA prepared from them. J. Virol. **15**:707-713, 1975.

144. Honess, R.W. and Roizman, B. Regulation of herpesvirus macromolecular synthesis: Sequential transition of polypeptide synthesis requires functional viral polypeptides. Proc. Nat. Acad. Sci. (USA) **72**:1276-1280, 1975.

145. Hayward, G.S., Frenkel, N. and Roizman, B. The anatomy of herpes simplex virus DNA: Strain differences and heterogeneity in the locations of restriction endonuclease cleavage sites. Proc. Nat. Acad. Sci. (USA) **72**:1768-1772, 1975.

146. Wadsworth, S., Jacob, R.J. and Roizman, B. Anatomy of herpes simplex virus DNA. II. Size, composition, and arrangement of inverted terminal repetitions. J. Virol. **15**:1487-1497, 1975.

147. Frenkel, N., Jacob, R.J., Honess, R.W., Hayward, G.S., Locker, H. and Roizman, B. Anatomy of herpes simplex virus DNA. III. Characterization of defective DNA molecules and biological properties of virus populations containing them. J. Virol. **16**:153-167, 1975.

148. Jacquemont, B. and Roizman, B. Ribonucleic acid synthesis in cells infected with herpes simplex virus: Characterization of viral high molecular weight nuclear RNA. J. Gen. Virol. **29**:155-165, 1975.

149. Honess, R.W. and Roizman, B. Proteins specified by herpes simplex virus. XIII. The glycosylation of viral polypeptides. J. Virol. **16**:1308-1326, 1975.

150. Hayward, G.S., Jacob, R.J., Wadsworth, S.C. and Roizman, B. Anatomy of herpes simplex virus DNA: Evidence for four populations of molecules that differ in the relative orientations of their long and short components. Proc. Nat. Acad. Sci. (USA) **72**:4243-4247, 1975.

151. Roizman, B. Molecular organization and expression of herpes simplex DNA. In: Advances in ***Pathobiology, Cancer Biology III: Herpes virus Epidemiology, Molecular Events, Oncogenicity, and Therapy***. Edited by C. Borek and D.W. King, Stratton Intercontinental Medical Book Corp., New York, pp. 54-60, 1976.

152. Pereira, L., Cassai, E., Honess, R.W., Roizman, B., Terni, M. and Nahmias, A. Variability in the structural polypeptides of herpes simplex virus 1 strains: Potential applications in molecular epidemiology. Infection and Immunity **13**:211-220, 1976.

153. Roizman, B. and Frenkel, N. Does genital herpes cause cancer? A Midway assessment. In: ***Sexually Transmitted Diseases.*** Edited by R.D. Caterall and C.S. Nicols, Academic Press, New York, pp. 151-170, 1976.

154. Wadsworth, S., Hayward, G.S. and Roizman, B. Anatomy of herpes simplex virus DNA. V. Terminally repetitive sequences. J. Virol. **17**:503-512, 1976.

155. Frenkel, N., Locker, H., Cox, B., Roizman, B. and Rapp, F. Herpes simplex virus DNA in transformed cells: Sequence complexity in five hamster cell lines and one derived hamster tumor. J. Virol. **18**:885- 893, 1976.

156. Silverstein, S., Millette, R., Jones, P. and Roizman, B. RNA synthesis in cells infected with herpes simplex virus. XII. Sequence complexity and properties of RNA differing in extent of adenylation. J. Virol. **18**: 977-991, 1976.

157. Frenkel, N., Locker, H., Batterson, W., Hayward, G.S. and Roizman, B. Anatomy of herpes simplex virus DNA. VI. Defective DNA originates from the S component. J. Virol. **20**:527-531, 1976.

158. Bartkoski, M.J., Jr. and Roizman, B. RNA synthesis in cells infected with herpes simplex virus. XIII. Differences in the methylation patterns of viral RNA during the reproductive cycle. J. Virol. **20**:583-588, 1976.

159. Jones, P.C., Hayward, G.S. and Roizman, B. Anatomy of herpes simplex virus DNA. VII. A RNA is homologous to noncontiguous sites in both the L and S components of viral DNA. J. Virol. **21**:268-278, 1977.

160 Pereira, L., Wolff, M., Fenwick, M. and Roizman, B. Regulation of herpesvirus synthesis. V. Properties of α polypeptides specified by HSV-1 and HSV-2. Virology **77**:733-749, 1977.

161. Fenwick, M. and Roizman, B. Regulation of herpesvirus macromolecular synthesis. VI. Synthesis and modification of viral polypeptides in enucleated cells. J. Virol. **22**:720-725, 1977.

162. Jacob, R.J. and Roizman, B. Anatomy of herpes simplex virus DNA. VIII. Properties of the replicating DNA. J. Virol. **23**:394-411, 1977.

163 Morse, L.S., Buchman, T.G., Roizman, B. and Schaffer, P.A. Anatomy of herpes simplex virus DNA. IX. Apparent exclusion of some parental DNA arrangement in the generation of intertypic (HSV-1 X HSV-2) recombinants. J. Virol. **24**:231-248, 1977.

164. Roizman, B., Frenkel, N., Kieff, E.D. and Spear, P.G. The structure and expression of human herpes virus DNA in productive infection and in transformed cells. In: ***Origins of Human Cancer***. Edited by J.D. Watson and H. Hiatt, Vol. 4, of the Cold Spring Harbor series on Cell Proliferation, pp. 1069-1111, 1977.

165. Bartkoski, M.J., Jr. and Roizman, B. Regulation of herpesvirus macromolecular synthesis. VII. Inhibition of internal methylation of mRNA late in infection. Virology **85**:146-156, 1978.

166. Roizman, B. The herpesviruses. In: ***Molecular Biology of Viruses***. Edited by N. Nayak, Marcel Dekker Publishing Co., New York, pp. 769- 848, 1977.

167. Buchman, T.G. and Roizman, B. Anatomy of bovine mammillitis DNA. I. Restriction endonuclease maps of four populations of molecules that differ in the relative orientation of their long and short components. J. Virol. **25**:395-407, 1978.

168. Morse, L.S., Pereira, L., Roizman, B. and Schaffer, P.A. Anatomy of HSV DNA. XI. Mapping of viral genes by analysis of polypeptides and functions specified by HSV-1 X HSV-2 recombinants. J. Virol. **26**:389-410, 1978.

169. Linnemann, C.C., Jr., Buchman, T.G., Light, I.J., Ballard, J.L. and Roizman, B. Transmission of herpes-simplex virus type 1 in a nursery for the newborn: Identification of viral isolates by DNA "fingerprinting". Lancet 1:964-966, 1978.

170. Buchman, T.G., Roizman, B., Adams, G. and Stover, H. Restriction endonuclease fingerprinting of herpes simplex virus DNA: A novel epidemiological tool applied to a nosocomial outbreak. J. Infect. Dis. **138**:488-498, 1978.

171. Buchman, T.G. and Roizman, B. Anatomy of bovine mammillitis DNA. II. Size and arrangements of the deoxynucleotide sequences. J. Virol. **27**:239-254, 1978.

172. Roizman, B. Genital herpes and cervical carcinoma. British Medical Journal 1:807, 1978.

173. Knipe, D.M., Ruyechan, W.T., Roizman, B. and Halliburton, I.W. Molecular genetics of herpes simplex virus: Demonstration of regions of obligatory and nonobligatory identity within diploid regions of the genome by sequence replacement and insertion. Proc. Nat. Acad. Sci. (USA) **75**:3896-3900, 1978.

174. Roizman, B. and Morse, L.S. Human herpesvirus 1 as a model of regulation of herpesvirus macromolecular metabolism: A review. In: ***Herpesviruses and Oncogenesis***. Edited by W. Henle, F. Rapp and G. de The, I.A.R.C., Lyon, France, pp. 269-297, 1978.

175. Morse, L., Pereira, L., Roizman, B. and Schaffer, P.A. The use of intertypic recombinants for analysis of gene organization in herpes simplex virus. In: ***Herpesviruses and Oncogenesis***. Edited by G.B. de The, W. Henle, and F. Rapp, I.A.R.C., Lyon, France, pp. 41-61, 1978.

176. Wolf, H. and Roizman, B. The regulations of γ (structural) polypeptide synthesis in herpes simplex virus 1 and 2 infected cells. In: ***Herpesviruses and Oncogenesis***. Edited by G.B. de The, W. Henle, and F. Rapp I. A. R.C., Lyon, France, pp. 327-336, 1978.

177. Roizman, B., Jacob, R.J., Knipe, D., Morse, L.S. and Ruyechan, W.T. On the structure, functional equivalence, and replication of the four arrangements of herpes simplex virus DNA. Cold Spring Harbor Symp. **43**:809-826, 1979.

178. Ruyechan, W.T., Morse, L.S., Knipe, D.M. and Roizman, B. Molecular genetics of herpes simplex virus. II. Mapping of the major virus glycoproteins and of the genetic loci specifying the social behavior of infected cells. J. Virol. **29**:677-697, 1979.

179. Knipe, D.M., Ruyechan, W. T. and Roizman, B. Molecular genetics of herpes simplex virus. III. Fine mapping of a genetic locus determining resistance to phosphonoacetate by two methods of marker transfer. J. Virol. **29**:698-704, 1979.

180. Roizman, B., Carmichael, S., de The, G.B., Masic, M., Nahmias, A., Plowright, W., Rapp, F., Sheldrick, P., Takαshi, M., Terni, M. and Wolfe, K. Provisional classification of herpesviruses. In: ***Herpesviruses and Oncogenesis***. Edited by G.B. de The, W. Henle and F. Rapp, I.A.R.C., Lyon, France, 1079-1082, 1978.

181. Fenwick, M., Morse, L.S. and Roizman, B. Anatomy of herpes simplex virus DNA. XI. Apparent clustering of functions effecting rapid inhibition of host DNA and protein synthesis. J. Virol. **29**:825-827, 1979.

182. Jacob, R.J., Morse, L.S. and Roizman, B. Anatomy of herpes simplex virus DNA. XIII. Accumulation of head to tail concatemers in nuclei of infected cells and their role in the generation of the four isomeric arrangements of viral DNA. J. Virol. **29**:448-457, 1979.

183. Roizman, B. and Buchman, T.G. The molecular epidemiology of herpes simplex viruses. Hospital Practice **14**:95-104, 1979.

184. Roizman, B. The structure and isomerization of herpes simplex virus genomes. Cell **16**:481-494, 1979.

185. Buchman, T.G., Roizman, B. and Nahmias, A.J. Demonstration of exogenous genital reinfection with herpes simplex virus type 2 by restriction endonuclease fingerprinting of viral DNA. J. Infect. Dis. **140**:295-304, 1979.

186. Roizman, B. The organization of the herpes simplex virus genomes. In: Annual Review of Genetics **13**:25-57, 1979.

187. Jones, P.C. and Roizman, B. Regulation of herpesvirus macromolecular synthesis. VIII. The

transcription program consists of three phases during which both extent of transcription and accumulation RNA in the cytoplasm are regulated. J. Virol. **31**:299-314, 1979.

188. Knipe, D.M., Ruyechan, W.T., Honess, R.W. and Roizman, B. Molecular genetics of herpes simplex virus: The terminal a sequences of the L and S components are obligatorily identical and constitute a part of a structural gene mapping predominantly in the S component. Proc. Nat. Acad. Sci. USA. 76:4534-4538, 1979.

189. Spear, P.G. and Roizman, B. Herpes simplex viruses. In: ***The Molecular Biology of Tumor Viruses***. Edited by J. Tooze, Cold Spring Harbor Laboratory, 2nd Edition, Part 2. pp. 615-746, 1980.

190. Roizman, B. Structural and functional organization of the herpes simplex virus genomes. In: ***Oncogenic Herpesviruses.*** Edited by F. Rapp, CRC Press, Boca Raton, FL. Vol. 1, pp. 19-51, 1980.

191. Hammer, S.M., Buchman, T.G., D'Angelo, L.J., Karchmer, A.W., Roizman, B. and Hirsch, M.S. Temporal cluster of herpes simplex encephalitis: Investigation by restriction endonuclease cleavage of viral DNA. J. Infect. Dis. **141**:436-440, 1980.

192. Wilcox, K., Sklyanskaya, E.I., Kohn, A. and Roizman, B. Herpes simplex virus phosphoproteins. I. Phosphate cycles on and off some viral polypeptides and can alter their affinity for DNA. J. Virol. **33**:167-182, 1980.

193. Post, L.E., Conley, A.J., Mocarski, E.S. and Roizman, B. Cloning of reiterated and nonreiterated herpes simplex virus 1 sequences as BamHI fragments. Proc. Nat. Acad. Sci. (USA) **77**:4201-4205, 1980.

194. Halliburton, I.W., Morse, L.S., Roizman, B. and Quinn, K.E. Mapping of the thymidine kinase genes of type 1 and type 2 herpes simplex viruses using intertypic recombinants. J. Gen. Virol. **49**:235-253, 1980.

195. LeMaster, S. and Roizman, B. Herpes simplex virus phosphoproteins: II. Characterization of the virion protein kinase and of the polypeptides phosphorylated in the virion. J. Virol. **35**:798-811, 1980.

196. Mocarski, E.S., Post, L.E. and Roizman, B. Molecular engineering of the herpes simplex virus genome: Insertion of a second L-S junction into the genome causes additional genome inversions. Cell **22**:243- 255, 1980.

197. Mackem, S. and Roizman, B. Regulation of herpesvirus macromolecular synthesis: Transcription-initiation sites and domains of a genes. Proc. Nat. Acad. Sci. (USA) **77**:7122-7126, 1980.

198. Halperin, S.A., Hendley, J.O., Nosal, C. and Roizman, B. DNA fingerprinting in investigation of apparent nosocomial acquisition of neonatal herpes simplex. J. Pediatrics **97**:91-93, 1980.

199. Buchman, T.G., Simpson, T., Nosal, C., Roizman, B. and Nahmias, A.J. The structure of herpes simplex virus DNA and its application to molecular epidemiology. In: ***Genetic Variation of Viruses.*** Edited by P. Palese and B. Roizman. Ann. N.Y. Acad. Sci. **354**:472-483, 1980.

200. Roizman, B. Genome variation and evolution among herpes viruses. In: ***Genetic Variation of Viruses***. Edited by P. Palese and B. Roizman. Ann. N.Y. Acad. Sci. **354**:472-483, 1980.

201. Knipe, D.M., Batterson, B. and Roizman, B. A gene function of herpes simplex virus required for

expression of all early viral genes. ***UCLA-ICN Symposium on Molecular and Cellular Biology.*** Vol. XVIII. Edited by B. Fields, R. Jaenisch and C.F. Fox. Academic Press, N.Y. pp. 369-378, 1980.

202. Adams, G., Stoves, B.H., Keenlyside, R.A., Hooton, T.M., Buchman, T.G., Roizman, B. and Stewart, J.A. Nosocomial herpetic infection in a pediatric intensive care unit. Am. J. Epidemiol. **113**:126-132, 1981.

203. Conley, A.F., Knipe, D.M., Jones, P.D. and Roizman, B. Molecular genetics of herpes simplex virus. VII. Characterization of a temperature-sensitive mutant produced by in vitro mutagenesis and defective in DNA synthesis and accumulation of γ polypeptides. J. Virol. **37**:191-206, 1981.

204. Norrild, B., Pedersen, B. and Roizman, B. Immunological reactivity of herpes simplex virus 1 and 2 polypeptides electrophoretically separated or transferred to diazobenzyloxymethyl paper. Infection and Immunity **31**:660-667, 1981.

205. Roizman, B., Batterson, W. and Knipe, D.M. The potential significance of late herpes simplex virus functions expressed early in replication: The tale of a ristetrapr-sensitive mutant. ***Perspectives in Virology XI***, Edited by M. Pollard. Alan R. Liss, Inc., N.Y. pp. 77-92, 1981.

206. Knipe, D.M., Batterson, W., Nosal, C., Roizman, B. and Buchan, A. Molecular genetics of herpes simplex virus. VI. Characterization of a temperature-sensitive mutant defective in the expression of all early viral gene products. J. Virol. **38**:539-547, 1981.

207. Post, L.E., Mackem, S. and Roizman, B. Regulation of α genes of herpes simplex virus: expression of chimeric genes produced by fusion of thymidine kinase with α gene promoters. Cell **24**:555-565, 1981.

208. Pereira, L., Dondero, D., Norrild, B. and Roizman, B. Differential immunologic reactivity and processing of glycoproteins gA and gB of herpes simplex virus types 1 and 2 made in Vero and Hep-2 cells. Proc. Nat. Acad. Sci. (USA) **78**:5202-5206, 1981.

209. Post, L.E. and Roizman, B. A generalized technique for deletion of specific genes in large genomes: α gene 22 of herpes simplex virus 1 is not essential for growth. Cell **25**:227-232, 1981.

210. Mackem, S. and Roizman, B. Regulation of herpes virus macromolecular synthesis: Temporal order of transcription of α genes is not dependent on the stringency of inhibition of protein synthesis. J. Virol. **40**:319-322, 1981.

211. Tognon, M., Furlong, D., Conley, A.J. and Roizman, B. Molecular genetics of herpes simplex virus. V. Characterization of a mutant defective in ability to form plaques at low temperatures and in a viral function which prevents accumulation of coreless capsids at nuclear pores late in infection. J. Virol. **40**:870-880, 1981.

212. Studdert, M.J., Simpson, T. and Roizman, B. Differentiation of respiratory and abortogenic isolates of equine herpesvirus 1 by restriction endonucleases. Science **214**:562-564, 1981.

213. Mocarski, E.S. and Roizman, B. Site specific inversion sequence of herpes simplex virus genome: Domain and structural features. Proc. Nat. Acad. Sci. (USA) **78**:7047-7051, 1981.

214. Roizman, B., Carmichael, L.E., Deinhardt, F., de The, G., Nahmias, A.J., Plowright, W., Rapp, F.,

Sheldrick, P., Takahashi, M. and Wolf, K. Herpesviridae: Definition, provisional nomenclature and taxonomy. Intervirology **16**:201-217, 1981.

215. Roizman, B. Multiplication of viruses. In: ***Medical Microbiology.*** Edited by S. Baron, Addison-Wesley Publishing Co., Menlo Park, CA., pp. 523-532, 1982.

216. Post, L.E., Norrild, B., Simpson, T. and Roizman, B. Chick ovalbumin gene fused to a herpes simplex virus α promoter and linked to a thymidine kinase gene is regulated like a viral gene. Molecular and Cellular Biology **2**:233-240, 1982.

217. Roizman, B. The family Herpesviridae. General description, taxonomy and classification. In: The Viruses, Vol. 1, ***The Herpesviruses.*** Edited by B. Roizman, Plenum Press, New York, pp. 1-23, 1982.

218. Centifanto-Fitzgerald, Y.M., Yamaguchi, T., Kaufman, H.E., Tognon, M. and Roizman, B. Ocular disease pattern induced by herpes simplex virus is genetically determined by a specific region of viral DNA. J. Exp. Med. **155**:475-489, 1982.

219. Roizman, B., Warren, J., Thuning, C.A., Fanshaw, M.S., Norrild, B., and Meignier, B. Application of molecular genetics to the design of live herpes simplex virus vaccines. Proceedings of the 17th Congress on Herpesvirus of Man and Animal: ***Standardization of Immunological Procedures***, Lyon, France, 1981. Develop. Biol. Standard. **52**:287-304, 1981.

Roizman, B. Future trends in herpes research in the next 10 years. Ibid pp. 546-548.

220. Roizman, B. and Tognon, M. Restriction enzyme analysis of herpesvirus DNA: Stability of restriction endonuclease patterns. Lancet 1:677, 1982.

221. Whitley, R., Lakeman, A.D., Nahmias, A. and Roizman, B. Differentiation by DNA restriction analysis of herpes simplex virus isolates obtained concomitantly from the brain and oro-labial sites of patients with encephalitis. New Eng. J. Med. **307**:1060-1062, 1982.

222. Pereira, L., Dondero, D. and Roizman, B. Herpes simplex virus glycoprotein gA/gB: Evidence that the infected Vero cell products co-map and arise by proteolysis. J. Virol. **44**:88-97, 1982.

223. Mackem, S. and Roizman, B. Regulation of α genes of Herpes simplex virus: The α27 promoter-thymidine kinase chimeric gene is positively regulated in converted L cells. J. Virol. **43**:1015-1023, 1982.

224. Mackem, S. and Roizman, B. Differentiation between α promoter and regulator regions of Herpes simplex virus I: The functional domains and sequence of a movable α regulator. Proc. Nat. Acad. Sci. (USA) **79**:4917-4921, 1982.

225. Mocarski, E.S. and Roizman, B. Herpesvirus-dependent amplification and inversion of cell-associated viral thymidine kinase gene flanked by viral a sequences and linked to an origin of viral DNA replication. Proc. Nat. Acad. Sci. (USA) **79**:5626-5630, 1982.

226. Mocarski, E.S. and Roizman, B. The structure and role of the herpes simplex virus DNA termini in inversion, circularization and generation of virion DNA. Cell **31**:89-97, 1982.

227. Mackem, S. and Roizman, B. Structural features of the herpes simplex virus α genes 4, 0, and 27 promoter-regulatory sequences which confer α regulation on chimeric thymidine kinase gene. J. Virol. **44**:939-949, 1982.

228. Roizman, B. and Tognon, M. Restriction endonuclease patterns of herpes simplex virus DNA: Application to diagnosis and molecular epidemiology. ***Proc. Symp. On New Horizons in Diagnostic Virology*** (1982). P.A. Bachmann, Editor. Current Topics Microbiol. & Immuno. **104**:275-286, 1983.

229. Batterson, W., Furlong, D. and Roizman, B. Molecular genetics of herpes simplex virus. VIII. Further characterization of a ts mutant defective in release of viral DNA and in other stages of viral reproductive cycle. J. Virol. **45**:397-407, 1983.

230. Braun, D., Pereira, L., Norrild, B. and Roizman, B. Application of denatured, electrophoretically separated and immobilized lysates of herpes simplex virus-infected cells for the detection of monoclonal antibodies and for studies of the properties of viral proteins. J. Virol. **46**:103-112, 1983.

231. Poffenberger, K.L., Tabares, E. and Roizman, B. Characterization of a viable, non-inverting herpes simplex virus 1 genome derived by insertion of sequences at the L-S component junction. Proc. Nat. Acad. Sci. (USA) **80**:2690-2694, 1983.

232. Batterson, W. and Roizman, B. Characterization of the herpes simplex virion-associated factor responsible for the induction of α genes. J. Virol. **46**:371-377, 1983.

233. Herz, C. and Roizman, B. The α promoter regulator-ovalbumin chimeric gene resident in human cells in regulated like the authentic α4 gene after infection with herpes simplex virus 1 mutants in α4 gene. Cell **33**:145-151, 1983.

234. Kristie, T., Batterson, W., Mackem, S. and Roizman, B. The regulatory elements in the domains of α genes of herpes simplex virus 1 (HSV-1). ***Proc. Cold Spring Harbor Conf. on Enhancer and Eukaryotic Gene Expression.*** Edited by Y. Gluzman and T. Shenk, Cold Spring Harbor, pp. 141-151, 1983.

235. Meignier, B., Norrild, B. and Roizman, B. Colonization of murine ganglia by a superinfecting strain of herpes simplex virus. Infect. and Immun. **41**:702-708, 1983.

236. Tognon, M., Cassai, E., Rotola, A. and Roizman, B. The heterogeneous regions in herpes simplex virus 1 DNA. Microbiologica **6**:191-198, 1983.

237. Roizman, B., Kristie, T., Batterson, W. and Mackem, S. The regulation of αgenes of herpes simplex virus 1. ***Proc. Of the P & S Biomedical Sciences Symp. On Transfer and Expression of Eukaryotic Genes.*** Edited by H. Vogel and H.S. Ginsberg, Academic Press, New York, pp. 227-238, 1984.

238. Roizman, B., Meignier, B., Norrild, B. and Wagner, J.L. Bioengineering of herpes simplex virus variant for potential use as live vaccines. In: ***Modern Approaches to Vaccines: Molecular and Biochemical Basis of Virus Virulence and Immunogenicity.*** Edited by R. Lerner and R. Chanock, Cold Spring Harbor, N.Y., pp. 274-281, 1984.

239. Braun, D.K., Roizman, B. and Pereira, L. Characterization of post-translational products of herpes simplex virus gene 35 proteins binding to the surface of full but not empty capsids. J. Virol. **49**:142-153,

1984.

240. Arsenakis, M. and Roizman, B. A post α gene function turns off the capacity of host protein to bind DNA in cells infected with herpes simplex virus 1. J. Virol. **49**:813-818, 1984.

241. Roizman, B., Norrild, B., Chan, C. and Pereira, L. Identification of a herpes simplex virus 2 glycoprotein lacking a known type 1 counterpart. Virology **133**:242-247, 1984.

242. Braun, D.K., Batterson, W. and Roizman, B. Identification and genetic mapping of a herpes simplex virus capsid protein which binds DNA. J. Virol. **50**:645-648, 1984.

243. Kristie, T.M. and Roizman, B. Separation of sequences defining basal expression from those conferring α gene recognition within the regulatory domains of herpes simplex virus 1 α genes. Proc. Nat. Acad. Sci. (USA) **81**:4065-4069, 1984.

244. Kousoulas, K.G., Pellett, P.E., Pereira, L. and Roizman, B. Mutations affecting conformation or sequence of neutralizing epitopes identified by reactivity of viable plaques segregate from syn and ts domains of HSV-1(F) gB gene. Virology **135**:379-395, 1984.

245. Roizman, B. The functional Organization of the Herpes simplex virus genomes. In: ***The Role of Viruses in Human Cancer***, Vol. I, Edited by G. Giraldo and E. Beth, Elsevier, Amsterdam, pp 11-24, 1984.

Roizman, B. Summing up. In: ***The Role of Viruses in Human Cancer***, Vol. II, Edited by G. Giraldo and E. Beth, Elsevier, Amsterdam, pp. 407-410, 1984.

246. Shih, M.-F., Arsenakis, M., Tiollais, P. and Roizman, B. Expression of Hepatitis B virus S gene by Herpes simplex virus 1 vectors carrying α and β regulated gene chimeras. Proc. Nat. Acad. Sci. (USA) **81**: 5867-5870, 1984.

247. Ackermann, M., Braun, D.K., Pereira, L. and Roizman, B. Characterization of α proteins 0, 4, and 27 with monoclonal antibodies. J. Virol. **52**:108-118, 1984.

248. Roizman, B. Principles of virus replication (Chapter 5) In: ***Virology***, Edited by B. Fields, D. M. Knipe, R. M. Chanock, B. Roizman, J. L. Melnick, R. E. Shope,, Raven Press, N.Y., pp. 69-75, 1985.

249. Roizman, B. and Batterson W. The replication of herpesviruses (Chapter 25) In: ***Virology***, Edited by B. Fields, D. M. Knipe, R. M. Chanock, B. Roizman, J. L. Melnick, R. E. Shope,, Raven Press, N.Y., pp. 497-526, 1985.

250. Pellett, P.E., Kousoulas, K.G., Pereira, L. and Roizman, B. The anatomy of the herpes simplex virus 1 (F) gB gene: primary sequence and predicted protein structure of the wild type and of monoclonal antibody resistant mutants. J. Virol. **53**:243-253, 1985.

251. Silver, S. and Roizman, B. γ_2-thymidine kinase chimeras are identically transcribed but regulated as γ_2 genes in herpes simplex virus genomes and as β genes in cell genomes. Mol. and Cell Biol. **5**:518-528, 1985.

252. Poffenberger, K.L. and Roizman, B. Studies on non-inverting genome of a viable herpes simplex

virus 1. Presence of head-to-tail linkages in packaged genomes and requirements for circularization after infection. J. Virol. **53**:589-595, 1985.

253. Roizman, B. and Arsenakis, M. Herpes simplex viruses as vectors. In: ***Microbiology 1985***, American Society for Microbiology, pp. 233-236, 1985

254. Shih, M-F., Arsenakis, M., Tiollais, P. and Roizman, B. Herpes simplex virus as vector for eukaryotic viral genes. In: ***Modern Approaches to Vaccines***, Edited by R. Lerner and R. M. Chanock, Cold Spring Harbor, pp. 177-180, 1985.

255. Hubenthal-Voss, J. and Roizman, B. The herpes simplex virus reiterated S component sequences (c_1) situated between the α sequence and α4 gene are not essential for virus replication. J. Virol. **54**:509-514, 1985.

256. Arsenakis, M. and Roizman, B. Genetic engineering of herpes simplex virus genome. In: ***The High-Technology Route to Virus Vaccines***, Edited by R. Dreesman and R. Kennedy, Am. Soc. Microbiol. Pp. 75-81, 1985.
257. Roizman, B. and Arsenakis, M. Genetic engineering of herpes simplex virus genomes for attenuation and expression of foreign genes. In ***Vaccinia Viruses as Vectors for Vaccine Antigens***, Edited by G. V. Quinnan, Elsevier Science Publishing Co. Amsterdam, pp. 211-213, 1985.

258. Jenkins, F.J., Casadaban, M. and Roizman, B. Application of the mini Mu phage for target sequence specific insertional mutagenesis of the herpes simplex virus genome. Proc. Nat. Acad. Sci. (USA) **82**:4773-4777, 1985.

259. Sears, A.E. and Roizman, B. Cell-specific selection of mutants of a herpes simplex virus recombinant carrying deletions. Virology **145**:176-180, 1985.

260. Chou, J. and Roizman, B. The isomerization of the herpes simplex virus 1 genome: Identification of the cis-acting and recombination sites within the domain of the a sequence. Cell **41**:803-811, 1985.

261. Sears, A.E., Meignier, B. and Roizman, B. Establishment of latency in mice by herpes simplex virus 1 recombinants carrying insertions affecting the regulation of the thymidine kinase gene. J. Virol. **55**:410-416, 1985.

262. Sears, A.E., Halliburton, I.W., Meignier, B., Silver, S. and Roizman, B. Herpes simplex virus mutant deleted in the α22 gene: growth and gene expression in permissive and restrictive cells, and establishment of latency in mice. J. Virol. **55**:338-346, 1985.

263. Ackermann, M., Sarmiento, M. and Roizman, B. Application of antibody to synthetic peptides for the characterization of the intact and truncated α22 protein specified by herpes simplex virus 1 and the R325 α22' deletion mutant. J. Virol. **56**:207-215, 1985.

264. Pellett, P.E., McKnight, J.L.C., Jenkins, F.J. and Roizman, B. Nucleotide sequence and predicted amino acid sequence of a protein encoded in a small herpes simplex virus DNA fragment capable of trans-inducing α genes. Proc. Nat. Acad. Sci. (USA) **82**:5870-5874, 1985.

265. Roizman, B. and Jenkins, F.J. Genetic engineering of novel genomes of large DNA viruses. Science **229**:1208-1218, 1985.

266. Pellett, P.E., Biggin, M.D., Barrell, B. and Roizman, B. The Epstein-Barr virus may encode a protein showing significant amino acid and predicted secondary structure homology with the glycoprotein B of herpes simplex virus 1. J. Virol. **56**:807-813, 1985.

267. Roizman, B., Sears, A.E., Meignier, B. and Arsenakis, M. Genetically engineered genomes of herpes simplex virus 1: Structure and biological properties. In: ***Genetically altered viruses and their environment***, Banburry Report, No. 22, Cold Spring Harbor, pp. 251-263, 1985.

268. Meignier, B. and Roizman, B. Herpes simplex virus vaccines. Antiviral Res. Suppl. **1**:259-265, 1985.

269. Chou, J. and Roizman, B. The terminal a sequence of the herpes simplex virus genome contains the promoter of a gene located in the repeat sequences of the L component. J. Virol. **57**:629-637, 1986.

270. Roizman, B. and Jenkins, F.J. The biologic and molecular properties of herpesviruses: A summary. In: ***Herpes and Papilloma Viruses, Their role in the Carcinogenesis of the Lower Genital Tract***. Edited by G. De Palo, F. Rilke, and H. zur Hausen. Serano Symposia Publications from Raven Press, N.Y., Vol. 31, pp. 1-13, 1986.

271. Mavromara-Nazos, P., Silver, S.D., Hubenthal-Voss, J., McKnight, J.L.C. and Roizman, B. Regulation of herpes simplex virus 1 genes: α gene sequence requirements for transient induction of indicator genes regulated by β or late (γ_2) promoters. Virology **149**:152-164, 1986.

272. Hummel, M., Arsenakis, M., Marchini, A., Lee, L., Roizman, B. and Kieff, E. Herpes simplex virus expressing Epstein-Barr virus nuclear antigen 1. Virology **148**:337-348, 1986.

273. McKnight, J.L.C., Kristie, T.M., Silver, S., Pellett, P.E., Mavromara-Nazos, P., Campadelli-Fiume, G., Arsenakis, M. and Roizman, B. Regulation of herpes simplex virus 1 gene expression: The effect of genomic environments and its implication for model systems. In: ***Cancer Cell IV***, Cold Spring Harbor Laboratories, pp. 163-173, 1986.

274. Ackermann, M., Longnecker, R., Roizman, B. and Pereira, L. Identification, properties, and gene location of a novel glycoprotein specified by herpes simplex virus 1. Virology **150**:207-220, 1986.

275. Arsenakis, M., Foa Tomasi, L., Speziali, V., Roizman, B. and Campadelli-Fiume, G. Expression and regulation of the glycoprotein C gene of herpes simplex virus 1 resident in a clonal L cell line. J. Virol. **58**:367-376, 1986.

215A. Roizman, B. Multiplication of viruses. In: ***Medical Microbiology***. Edited by S. Baron, Addison-Wesley Publishing Co., Menlo Park, CA., Second edition, pp. 716-726, 1986.

276. Longnecker, R. and Roizman, B. Generation of inverting herpes simplex virus 1 mutant lacking the L-S junction a sequences, an origin of DNA synthesis including those specifying glycoprotein E and α47. J. Virol. **58**:583-591, 1986.

248A. Roizman, B. Principles of virus replication (Chapter 5) In: ***Fundamental Virology***, Edited by B. Fields, D. M. Knipe, R. M. Chanock, B. Roizman, J. L. Melnick, R. E. Shope, Raven Press, N.Y., pp. 69-75, 1986.

249A. Roizman, B. and Batterson, W. The replication of herpesviruses (Chapter 29) In: ***Fundamental Virology***, Edited by B. Fields, D.M. Knipe, R.M. Chanock, B. Roizman, J.L. Melnick, R.E. Shope, Raven Press, N.Y.,pp. 607-636, 1986.

277. Ackermann, M., Chou, J., Sarmiento, M., Lerner, R.A., and Roizman, B. Identification by antibody to a synthetic peptide of a protein specified by a diploid gene located in the terminal repeats of the L component of herpes simplex virus genome. J. Virol. **58**:843-850, 1986.

278. Meignier, B., Norrild, N., Thuning, C., Warren, J., Frenkel, N., Nahmias, J., Rapp, F. and Roizman, B. Cervical cancer was not induced by long term frequent vaginal exposure to live or inactivated herpes simples viruses. Int. J. Cancer **38**:387-394, 1986.

279. Yehiely, F., Thuning, C., Meignier, B., Norrild, B., Warren, J., Nahmias, A.J., Rapp, F., Roizman, B. and Frenkel, N. Analyses of transplanted murine tumors for HSV DNA sequences. Int. J. Cancer **38**:395-403, 1986.

280. Kristie, T. M. and Roizman, B. α4, the major regulatory protein of herpes simplex virus type 1, is stably and specifically associated with promoter-regulatory domains of α genes and of selected other viral genes. Proc. Nat. Acad. Sci. (USA) **83**:3,218-3,222, 1986.

281. Jenkins, F. J. and Roizman, B. Herpes simplex virus recombinants with non-inverting genomes frozen in different isomeric arrangements are capable of independent replication. J. Virol. **59**:494-499, 1986.

282. Kristie, T. M. and Roizman, B. The binding site of the major regulatory protein α4 specifically associated with the promoter-regulatory domains of α genes of herpes simplex virus type 1. Proc. Nat. Acad. Sci. (USA) **83**:4,700-4,704, 1986.

283. Mavromara-Nazos, P., Ackermann, M. and Roizman, B. Construction and properties of a viable herpes simplex virus 1 recombinant lacking the coding sequences of the α47 gene. J. Virol. **60**:807-812, 1986.

284. Pellett, P. E., Jenkins, F. J., Ackermann, M., Sarmiento, M. and Roizman, B. Transcription initiation sites and nucleotide sequence of a herpes simplex virus 1 gene conserved in Epstein-Barr virus genome and reported to affect the transport of viral glycoproteins. J. Virol. **60**:1134-1140, 1986.

285. Jenkins, F. J. and Roizman, B. Site-specific mutagenesis of large viral genomes. Bioassays **5**:244-247, 1986.

286. Arsenakis, M., Hubenthal-Voss, J., Campadelli-Fiume, G., Pereira, L. and Roizman, B. Construction and properties of a cell line constitutively expressing the herpes simplex virus glycoprotein B dependent on functional α4 protein synthesis. J. Virol. **60**:674-682, 1986.

265A. Roizman, B. and Jenkins, F. J. Genetic engineering of novel genomes of large DNA viruses. Reprinted as Chapter 2, In: ***Biotechnology, The Renewable Frontier***; Edited by D. E. Koshland, Jr., The American Assoc. for Advancement of Science, Washington, D.C., pp. 23-36, 1986.

287. Ackermann, M. and Roizman, B. Cell type dependence of herpes simplex virus gene expression and

processing of viral proteins. In: ***Advances in animal cell technology: cell engineering, evaluation and exploitation***. S. Karger, Basel, pp. 29-47, 1987.

288. Arsenakis, M., Poffenberger, K. L. and Roizman, B. Novel herpes simplex virus genomes: Construction and application. In: ***Viruses and Human Cancer***, Proceedings UCLA Symposia on Molecular and Cellular Biology, New series, volume 43 edited by R. C. Gallo, W. Haseltine, G. Klein, and H. zur Hausen. Alan R. Liss, Inc., New York, N.Y., pp. 427-441, 1987.

289. Kristie, M. T. and Roizman, B. The binding of the major regulatory protein α4 to the promoter-regulatory domains of herpes simplex virus 1 genes. In: ***Transcriptional Control Mechanisms.*** Proceedings UCLA Symposium on Molecular and Cellular Biology New Series, volume 52 edited by D. Granner, M. G. Rosenfeld, and S. Chang. Alan R. Liss, Inc., New York N.Y., pp. 71-75, 1987.

290. Roizman, B. and Kristie, T. M. Cis-acting elements and trans-acting factors involved in the regulation of α genes of herpes simplex virus type 1. In: ***Viral Carcinogenesis, Functional Aspects***, Edited by N.O. Kjeldgaard and J. Forchhammer; Munksgaart, Copenhagen, pp. 161-174, 1987.

291. Roizman, B., Jenkins, F. J. and Kristie, T. M. Herpesviruses, gene regulation, latency and genetic engineering. In: ***The Molecular Basis of Viral Multiplication***, Edited by Raul Perez-Berkoff Plenum Press, New York pp. 517-546, 1987.

292. Kristie, T. M. and Roizman, B. Host cell proteins bind to the cis-acting site required for virion-mediated induction of herpes simplex virus 1 α genes. Proc. Nat. Acad. Sci. (USA) **84**:71-75, 1987.

293. Meignier, B., Jourdier, T.M., Norrild, B., Pereira, L. and Roizman, B. Immunization of experimental animals with reconstituted glycoprotein mixtures of herpes simplex virus 1 and 2: Protection against challenge with virulent virus. J. Inf. Dis. **155**:921-930, 1987

294. Meignier, B., Longnecker, R. and Roizman, B. Construction and in vivo evaluation of two genetically engineered prototypes of live attenuated herpes simplex virus vaccines. In: **Vaccines 87**: Modern Approaches to New Vaccines, Edited by R. Chanock, R.A. Lerner, Fred Brown and H.S. Ginsberg, Cold Spring Harbor Laboratories, 368-373, 1987.

295. McKnight, J. L. C., Pellett, P. E., Jenkins, F. J. and Roizman, B. Characterization and nucleotide sequence of two herpes simplex virus 1 genes whose products modulate α-trans-inducing factor-dependent activation of α genes. J. Virol. **61**:992-1001, 1987.

296. Roizman, B. and Kristie, T. M. Regulation of herpes simplex virus 1 (HSV-1) gene expression: Comparison of two viral trans-acting factors involved in the regulation of α genes. In: ***Integration and control of metabolic processes: pure and applied aspects.*** O. L. Kon, Ed., ICSU Cambridge University Press, New York pp. 55-86, 1987.

297. Longnecker, R. and Roizman, B. Clustering of genes dispensable for growth in cell culture in the small component of the herpes simplex virus 1 genome. Science **236**:573-576, 1987.

298. Roizman, B. and Sears, A. E. An inquiry into the mechanism of herpes simplex virus latency. Annual Reviews in Microbiology **41**:543-571, 1987.

299. Longnecker, R., Chatterjee, S., Whitley, R. J. and Roizman, B. Identification of a novel herpes

simplex virus 1 glycoprotein gene within a gene cluster dispensable for growth in cell culture. Proc. Nat. Acad. Sci. (USA) **84**:4,303-4,307, 1987.

300. Purves, F. C., Longnecker, R. M., Leader, D. P. and Roizman, B. The herpes simplex virus 1 protein kinase is encoded by open reading frame U_S3 which is not essential for virus growth in cell culture. J. Virol. **61**:2,896-2,901, 1987.

301. McKnight, J. L. C., Kristie, T. M. and Roizman, B. Binding of the virion protein mediating α gene induction in herpes simplex virus 1 infected cells to its cis site requires cellular proteins. Proc. Nat. Acad. Sci. (USA) **84**:7,061-7,065, 1987.

302. Hubenthal-Voss, J., Starr, L. and Roizman, B. The herpes simplex virus origins of DNA synthesis in the S component are each contained in a transcribed open reading frame. J. Virol. **61**:3,349-3,355, 1987.

303. Norrild, B., Meignier, B. and Roizman, B. The Humoral Immmunoresponse of Aotus Monkeys Immunized with Purified Glycoproteins or with Recombinant Virus. Akt. Dermatol. **13**:243-244, 1987.

304. Mavromara-Nazos, P. and Roizman, B. Activation of herpes simplex virus γ_2 genes by viral DNA replication. Virology **161**:593-598, 1987.

305. Kristie, T. M., Michael, N., Spector, D. and Roizman, B. Proteins interacting at the cis-acting sites for αTIF and α4, two major herpes simplex virus 1 trans-acting factors. In: ***Mechanisms of Control of Gene Expression***, UCLA Symposium, Alan R. Liss, Inc., New York, pp. 201-212, 1987.

306. Meignier, B., Longnecker, R., Mavromara-Nazos, P., Sears, A. and Roizman, B. Virulence of and establishment of latency by genetically engineered mutants of herpes simplex virus 1. Virology **162**:251-254, 1987.

307. Arsenakis, M., Campadelli-Fiume, G. and Roizman, B. Regulation of glycoprotein D synthesis: Does α4, the major regulatory protein of herpes simplex virus 1 regulate late genes both positively and negatively? J. Virol. **62**:148-158, 1988.

308. Campadelli-Fiume, G., Arsenakis, M., Farabegoli, F. and Roizman, B. Entry of herpes simplex virus 1 in BJ cells that constitutively express viral glycoprotein D is by endocytosis and results in the degradation of the virus. J. Virol. **62**: 159-167, 1988.

309. Hubenthal-Voss, J., Houghten, R.A., Pereira, L. and Roizman, B. Mapping of functional and antigenic domains of the α4 protein of herpes simplex virus. J. Virol. **62**:454-462, 1988.

310. Roizman, B. and Meignier, B. Immunization against viral infections associated with human cancer: the promise of biotechnology. Ca 38:95-10 3, 1988. Reprinted in American Cancer Society Professional Education Publication.

311. Arsenakis, M., Campadelli-Fiume, G., Lombardo, M.T. and Roizman, B. The glycoprotein C gene of herpes simplex virus 1 resident in clonal L cell lines manifests two regulatory domains conferring a dominant α and a subordinate γ_2 regulation. Virology **162**:300-310, 1988.

312. Kristie, T.M. and Roizman, B. Differentiation and DNA contact points of the host proteins binding at the cis-site for the virion mediated induction of α genes of herpes simplex virus 1. J. Virol. **62**:1,145-

1,157, 1988.

313. Michael, N., Spector, D., Mavromara-Nazos, P, Kristie, T.M. and Roizman, B. The DNA binding properties of the major regulatory protein α4 of herpes simplex viruses. Science **239**:1,531-1,534, 1988.

314. Roizman, B., Kristie, T., Michael, N., McKnight, J.L.C. Mavromara-Nazos, P. and Spector, D. The trans-activation of viral gene expression in herpes simplex virus infected cells. ***Herpes and Papilloma Viruses, Their role in the Carcinogenesis of the Lower Genital Tract II***. Edited by G. De Palo, F. Rilke, and H. zur Hausen. Serano Symposia Publications from Raven Press, Vol. 46 pp. 21-40, 1988.

315. Meignier, B., Longnecker, R. and Roizman, B. The R7017 and R7020 herpes simplex virus recombinant prototype vaccine strains: animal studies. In ***Vaccines 88***, Edited by H. Ginsberg, F. Brown, R.A. Learner,and R.M. Chanock, Cold Spring Harbor Laboratories, pp. 193-196, 1988.

316. Longnecker R., Roizman, B. and Meignier, B. Herpes simplex viruses as vectors: Properties of the prototype vaccine strain suitable for use use as a vector. In ***Viral Vectors*** Edited by Y. Gluzman and S.H. Hughes, Cold Spring Harbor, pp. 68-72, 1988.

317. Meignier, B., Longnecker, R. and Roizman, B. In vivo behavior of genetically engineered herpes simplex viruses R7017 and R7020. I. Construction and evaluation in rodent animal models. J. Infect. Dis. **158**:602-614, 1988.

318. Campadelli-Fiume, G., Avitabile, E., Fini, S., Stirpe, D., Arsenakis, M. and Roizman, B. Herpes simplex virus glycoprotein D is sufficient to induce spontaneous pH independent fusion of a cell line that constitutively expresses the glycoprotein. Virology **166**:598-601, 1988.

319. Hubenthal-Voss, J. and Roizman, B. The properties of two 5' coterminal RNAs transcribed part way and across the S component origin of DNA synthesis of the Herpes simplex virus 1 genome. Proc. Nat. Acad. Sci. (USA) **85**:8,454-8,458, 1988.

320. Roizman, B., Kristie, T. M., McKnight, J. L. C., Michael, N., Mavromara-Nazos, P. and Spector, D. The trans-activation of herpes simplex virus gene expression: comparison of two factors and their cis sites. Biochimie **70**:1,031-1,043, 1988.

321. Roizman, B. and Longnecker, R. Genetic engineering of novel herpes simplex virus genomes: A probe for the study of genome structure, function, and evolution. In: ***Molecular Biology of Infectious Diseases; Colloque du Centenaire de l'Institut Pasteur***, Edited by M. Schwartz. Elsevier, Paris, pp. 91-98, 1988.

322. Hubenthal-Voss, J., Houghten, R. A. and Roizman, B. Analysis of the functional and antigenic domains of the herpes simplex virus major regulatory protein α4. In: ***Synthetic Peptides: Approaches to Biological Problems***, UCLA symposia on ***Molecular and Cellular Biology, New Series***, Vol. 86, Alan R. Liss, Inc., New York, N.Y. pp. 239-254, 1988.

323. Meignier, B. and Roizman, B. Genetic engineering of novel herpes simplex virus vectors of foreign genes. In: ***Proceedings of the 8th International Biotechnology Symposium***, Edited by G. Durand, L. Bobichon, and J. Florent, Societe Francaise de Microbiologie, Paris, pp. 740-745, 1988.

324. Chou, J. and Roizman, B. Characterization of DNA sequence common and DNA sequence specific

proteins binding to the cis-acting sites for the cleavage of the terminal a sequence of herpes simplex virus 1 genome. J. Virol. **63**:1,059-1,068, 1989.

325. Mavromara-Nazos, P. and Roizman, B. Delineation of regulatory domains of early (ß) and late γ_2 genes by construction of chimeric genes expressed in herpes simplex virus 1 genomes. Proc. Nat. Acad. Sci. (USA) **86**:4,071-4,075, 1989.

326. Arsenakis, M. and Roizman, B. Herpes simplex virus vectors. In: ***Concepts in Viral Pathogenesis III***, Edited by A. L. Notkins and M. B. A. Oldstone, Springer Verlag, New York, pp. 71-76, 1989.

327. Roller, R.J, McCormick A.L. and Roizman, B. Cellular proteins specifically bind single- and double-stranded DNA and RNA from the initiation site of a transcript which crosses the origin of DNA replication of herpes simplex virus 1. Proc. Nat. Acad. Sci. (USA) **86**:6,518-6,522, 1989.

328. Michael, N, and Roizman, B. The binding of herpes simplex virus 1 major regulatory protein to viral DNA. Proc. Nat. Acad. Sci. (USA) **86**:9,808-9,817, 1989

329. Meignier, B. and Roizman, B. Genetic Engineering and properties of Novel Herpes simplex viruses for use as potential vaccines and as vectors of foreign genes. In ***The Immune Response to Viral Infections***, B.A. Asconas, B. Moss, G. Torrigiani, and S. Gorini, Eds., Vol 257 of ***Advances in Experimental Medicine and Biology***; Plenum Press New York 1989 pp 187-192.

330. Roizman, B. The Multiplication of Viruses: An overview. In: Fields' ***Virology*** 2nd Edition, B.N. Fields, D.M. Knipe, R.M. Chanock, M.S. Hirsch, J.L. Melnick, T. P. Monath and B. Roizman , editors, Raven Press, New York, pp 87-94, 1990.

Reprinted in ***Fundamental Virology***, 2nd Edition, B.N. Fields, D.M. Knipe, R.M. Chanock, M.S. Hirsch, J.L. Melnick, T. P. Monath and B. Roizman, editors, Raven Press, New York, 87-94, 1990

331. Roizman, B. The Family Herpesviridae: a brief introduction. In: Fields' ***Virology*** 2nd Edition, B. N. Fields, D. M. Knipe, R. M. Chanock, M. S. Hirsch, J. L. Melnick, T. P. Monath and B. Roizman, editors, Raven Press, New York, 1,787-1,794, 1990.

Reprinted in ***Fundamental Virology***, 2nd Edition, B. N. Fields, D. M. Knipe, R. M. Chanock, M. S. Hirsch, J. L. Melnick, T. P. Monath and B. Roizman, editors, Raven Press, New York, 841-857, 1990

332. Roizman, B. and Sears, A.E. Herpes simplex viruses and their replication. Fields' ***Virology*** 2nd Edition, B. N. Fields, D. M. Knipe, R. M. Chanock, M. S. Hirsch, J. L. Melnick, T. P. Monath and B. Roizman, editors, Raven Press, New York, 1,795-1,841, 1990

Reprinted in ***Fundamental Virology***, 2nd Edition, B. N. Fields, D. M. Knipe, R. M. Chanock, M. S. Hirsch, J. L. Melnick, T. P. Monath and B. Roizman, editors, Raven Press, New York, 849-895, 1990

333. Chou. J. and Roizman, B. The herpes simplex virus 1 gene for ICP34.5, which maps in inverted repeats, is conserved in several limited-passage isolates but not in strain 17syn+ J. Virol. **64**:1,014-1,020, 1990

334. Roller, R. J. and Roizman, B. The herpes simplex virus U_S11 open reading frame encodes a sequence specific RNA binding protein. J. Virol. **64**:3,463-3,470, 1990.

335. Spector, D., Purves, F., and Roizman, B. Mutational analysis of the promoter region of the α27 gene of herpes simplex virus 1 within the context of the viral genome. Proc. Nat. Acad. Sci. (USA) **87**:5,268-5,272 1990.

336. Michael, N. and Roizman, B. Determination of the number of protein monomers inding to DNA with Fab fragments of monoclonal antibodies to the protein. Methods in Molecular and Cellular Biology, **1**:203-211, 1990.

337. Meignier, B. Martin, B., Whitley, R. J., and Roizman, B. In vivo behavior of genetically engineered herpes simplex viruses R7017 and R7020. II. Studies in immunocompetent and immunosuppressed owl monkeys (Aotus trivirgatus). J. Infect. Dis. **162**:313-322, 1990

338. Barker, D. E. and Roizman, B. Identification of three genes non essential for growth in Cell Culture near the right terminus of the unique sequences of long component of herpes simplex virus 1. Virology, **177**:684-691, 1990

339. Arsenakis, M. and Roizman, B. Evaluation of isogenic viral promoters for expression of foreign genes in herpes simplex virus 1 genomes. Methods in Molecular and Cellular Biology, **2**:5-16, 1990.

340. Campadelli-Fiume, G., Stirpe, D., Boscaro, A., Avitabile, E., Foa-Thomasi, L, Barker, D.E., and Roizman, B. Glycoprotein C dependent attachment of herpes simplex virus to susceptible cells leading to productive infection. Virology, **178**:213-222, 1990

341. Campadelli-Fiume, G., Qi, S., Avitabile, E., Foa-Tomasi, L., Brandimarti, R., and Roizman, B. Glycoprotein D of herpes simplex virus encodes a domain which precludes penetration of cells expressing the glycoprotein by superinfecting cells. J. Virol. **64**:6,070-6,079, 1990.

342. Chou, J., Kern, E. R., Whitley, R. J., and Roizman, B. Mapping of herpes simplex virus 1 neuro-virulence to $\gamma_1$34.5, a gene nonessential for growth in cell culture. Science, **250**:1,262-1,266, 1990

343. Roizman, B. Whither herpesviruses. In **Immunobiology and Prophylaxis of Human Herpesvirus Infections**. Edited by C. Lopez, R. Mori, B. Roizman, and R.J. Whitley. Plenum Press New York, N.Y, 1990 pp 285-291

344. Roizman, B. and Spector, D. The induction of α genes by the α trans-inducing factor. In **Herpes simplex virus transcription and its regulation**, E.K. Wagner ed., CRC Press, Boca Raton, Fl, 1990, pp. 17-28

345. Sears, A. E. and Roizman, B. Amplification by host factors of a sequence contained within the herpes simplex virus 1 genome. Proc. Nat. Acad. Sci. (USA) **87**:9,441-9,440, 1990

346. Hukkanen, V., Heino, P., Sears, A. E., and Roizman, B. Detection of herpes simplex virus latency-associated RNA in mouse trigeminal ganglia by in situ hybridization using nonradioactive digoxigenin-labeled DNA and RNA probes. Methods in Molecular and Cellular Biology, **2**:70-81, 90 1990.

347. Liu, F. and Roizman, B. The promoter, transcriptional unit and coding sequence of herpes simplex virus 1 family 35 proteins are contained within and in frame with the U_L26 open reading frame. J. Virol. **65**:206-212, 1991

348. Baines, J., and Roizman, B. The open reading frames U_L3, U_L4, U_L10, and U_L16 are dispensable for the replication of herpes simplex virus 1 in cell culture. J. Virol. **65**:938-944, 1991.

349. Campadelli Fiume, G. Farabegoli, F., Di Gaeta S., and Roizman, B. On the origin of unenveloped capsids in the cytoplasm of cells infected with herpes simplex virus 1. J. Virol. **65**:1,589-1,595, 1991

350. Sears, A. E., Hukkanen, V., Labow, M., Levine, A. J., and Roizman, B. Expression of herpes simplex virus 1 α trans-inducing factor does not induce reactivation of latent virus or prevent the establishment of latency in mice. J. Virol. **65**:3,929-3,935, 1991

351. Roizman, B. Multiplication (Virology) in ***Medical Microbiology*** 2nd Edition, Edited by S. Baron. Churchill Livingstone, Inc. New York, N.Y., 1991, pp. 571-583.

352. Roizman, B. Herpesviruses. In: ***Encyclopedia of Human Biology*** Edited by R. Dulbecco, Academic Press, Vol 4, pp.187-194, 1991.

353. Sears, A. E., McGwire, B.S . and Roizman, B. Infection of polarized MDCK cells with herpes simplex virus 1: Two asymmetrically distributed cell receptors interact with different viral proteins. Proc. Nat. Acad. Sci. (USA) **88**:5,087-5,091, 1991.

354. Spector, D., Purves, F. and Roizman, B. Role of α-transinducing factor (VP16) in the induction of α genes within the context of viral genomes. J. Virol. **65**:3,504-3,513, 1991.

355. Blaho, J. and Roizman, B. ICP4, the major regulatory protein of herpes simplex virus, shares features common to GTP binding proteins and is adenylated and guanylated. J. Virol. **65**:3,759-3,769, 1991.

356. Roizman, B. and Baines, J. The Diversity and Unity of Herpesviridae. Comp. Immunol., Microbiol. And Infect. Dis., **14:**63-79, 1991.

357. Liu., F. and Roizman, B. The herpes simplex virus 1 gene encoding a protease also contains within its coding domain the gene encoding the more abundant substrate. J. Virology **65**:5,149-5,156, 1991.

358. Roller R. J. and Roizman, B. Herpes simplex virus 1 RNA binding protein U_S11 negatively regulates the accumulation of a truncated viral mRNA. J. Virol. **65**: 5,873-5,879, 1991.

359. Purves, F.C., Spector, D. and Roizman, B. The herpes simplex virus 1 protein kinase encoded by U_S3 gene mediates post translational modification of the phosphoprotein encoded by the U_L34 gene. J. Virol. **65**: 5,757-5,764, 1991.

360. Baines J.D., Ward, P.L., Campadelli-Fiume G. and Roizman B. The U_L20 gene of Herpes simplex virus 1 encodes a function necessary for viral egress. J. Virol. **65**: 6414-6424, 1991.

361. Roizman, B. Introduction: Ojectives of herpes simplex virus vaccines seen from a historical perspective. Reviews of Infectious Diseases **13**:S892-894, 1991.

362. Barker, D.E. and Roizman B. The unique sequence of the herpes simplex virus-1 L component contains an additional translated open reading frame designated as $U_L49.5$. J. Virol.**66**:562-566, 1992.

363. Barker, D. and Roizman, B. Molecular biology of herpes simplex virus. In: ***Molecular and Cell Biology of sexually-transmitted Diseases,*** D. J. M. Wright and L. C Archard eds., Chapman and Hall, 1992, pp.259-281.

364. Liu, F. and Roizman, B. Differentiation of multiple domains in the herpes simplex virus 1 protease encoded by the U_L26 gene. Proc. Nat. Acad. Sci. (USA), **89**:2076-2080, 1992.

365. Roizman, B. and Kaplan, L. J. Herpes simplex viruses, Central Nervous System, and Encephalitis: A two-body problem, with one outcome and too many questions. In ***Molecular Neurovirology; Pathogenesis of viral CNS infections.*** R. P. Roos, ed. Humana Press, Totowa, N.J. 1992, pp.3-23.

366. Chou, J. and Roizman, B. The $\gamma_1$34.5 gene of herpes simplex virus 1 precludes neuroblastoma cells from triggering total shutoff of protein synthesis characteristic of programmed cell death in neuronal cells. Proc. Nat. Acad. Sci. (USA) **89**:3,266-3,270, 1992.

367. Roizman, B., Desrosiers R. C., Fleckenstein, B., Lopez, C., Minson, A.C. and Studdert, M.J. The Family Herpesviridae: An Update. Archives of Virology, **123**:425-449, 1992.

368. Roller, R. J. and Roizman, B. The herpes simplex virus 1 RNA binding protein U_L11 is a virion component and associates with ribosomal 60S subunits. J. Virol. **66**:3,624-3,632, 1992.

369. Purves, F.C., Spector, D. and Roizman, B. U_L34, the target of the herpes simplex virus U_S3 protein kinase, is a membrane protein which in its unphosphorylated state associates with novel phosphoproteins. J. Virol. **66**:4,295-4,303, 1992.

370. McCormick, L., Roller, R. J. and Roizman, B. Characterization of a herpes simplex virus sequence which binds a cellular protein as either a single stranded or double stranded DNA or RNA. J. Virol. **66:**3,435-3,447, 1992.

371. Baines, J. D. and Roizman, B. The U_L11 gene of herpes simplex virus 1 encodes a function that facilitates nucleocapsid envelopment and egress from cells. J. Virol. **66**:5,168-5,174, 1992.

372. Romanelli, M. G., Mavromara-Nazos, P., Spector, D. and Roizman, B. Mutational analysis of the ICP4 binding sites in the 5' transcribed noncoding domains of the herpes simplex virus 1 U_L49.5 γ_2 gene. J. Virol. **66**:4,855-4,863, 1992.

373. Baines, J. D. and Roizman, B. The cDNA of U_L15, a highly conserved herpes simplex virus 1 gene, effectively replaces the two exons of the wild type virus. J.Virol. **66:**5,621-5,626, 1992.

374. Purves, F.C. and Roizman, B. The U_L13 gene of herpes simplex virus 1 encodes the functions for posttranslational processing associated with phosphorylation of the regulatory protein α22. Proc. Nat. Acad. Sci. (USA) **89**:7,310-7,314, 1992.

375. Blaho, J.A., Michael, N., Kang, V., Aboul-Ela, N., Smulson, M.E., Jacobson, M.K. and Roizman, B. Differences in the poly(ADP-ribosyl)ation patterns of ICP4, the herpes simplex virus major regulatory protein, in infected cells and in isolated nuclei. J. Virol. **66**:6,398-6,407, 1992.

376. Dilanni, C.L., Drier, D.A., Deckman, I.C., McCann III, P.J., Liu, F., Roizman, B., Colonno, R.J. and

Cordingley, M.G. Identification of the herpes simplex virus-1 protease cleavage sites by direct sequence analysis of autoproteolytic cleavage products. J. Biol. Chem. **268**:2,048-2,051, 1993.

377. Baines J. D. and Roizman, B. Application of Genetic Engineering to study organization and function of herpes simplex virus genes. In: ***Genome Research in Molecular Medicine and Virology***, K.W. Adolph, ed. Academic Press, New York, N.Y. 1993, pp. 283-304.

378. Liu, F. and Roizman, B. Characterization of the protease and other products of the amino-terminus proximal cleavage of the Herpes Simplex Virus 1 U_L26 protein. J. Virol. **67**:1,300-1,309, 1993.

379. Michael, N. and Roizman, B. Repression of the herpes simplex virus 1 α4 gene by its gene product occurs within the context of the viral genome and is associated with all three identified cognate sites. Proc. Nat. Acad. Sci. (USA) **90**:2,286-2,290, 1993.

380. Baines, J.D. and Roizman, B. The U_L10 Gene of Herpes Simplex Virus 1 encodes a novel viral glycoprotein, gM, which is present in the Virion and in the Plasma Membrane of Infected Cells. J. Virol. **67**:1,441-1,452, 1993.

381. Igarashi, K., Fawl, R., Roller, R. J. and Roizman, B. Construction and properties of a recombinant herpes simplex virus 1 lacking both S component origins of DNA synthesis. J. Virol. **67**:2,123-2,132, 1993.

382. Campadelli, G., Brandimarti, R., Di Lazzaro, C., Ward, P. L., Roizman, B. and Torrisi, M. R. Fragmentation and dispersal of Golgi proteins and redistribution of glycoproteins and glycolipids processed through the Golgi apparatus after infection with herpes simplex virus 1. Proc. Nat. Acad. Sci. (USA) **90**:2,798-2,802, 1993.

383. Whitley, R.J., Kern, E., Chatterjee, S., Chou, J. and Roizman, B. Replication, establishment of latency, and induced reactivation of herpes simplex virus $\gamma_1$34.5 deletion mutants in rodent models. J. Clinical Invest. **91**:2,837-2,843, 1993.

384. Georgopoulou, U., Michaelidou, A., Roizman, B. and Mavromara-Nazos, P. Identification of a new transcriptional unit that yields a gene product within the unique sequences of the short component of the herpes simplex virus 1 genome. J. Virol. 67:3,961-3,968, 1993.

385. Blaho J. A., Mitchell, C. and Roizman, B. Guanylylation and adenylylation of the α regulatory proteins of herpes simplex virus requires a viral β or γ function. J. Virol. 67:3,891-3,900, 1993.

386. Spector, D., Purves, F.C., King R.W. and Roizman, B. Regulation of α and γ gene expression in cells infected with herpes simplex viruses. In: ***Regulation of gene expression*** **of animal viruses.** L. Carrasco, N. Sonenberg, and E. Wimmer, Eds. Plenum Press, N.Y., pp. 25-42, 1993.

387. Roizman B. The Family Herpesviridae. In: ***The human herpesviruses***. Edited by B. Roizman, C. Lopez and R. J. Whitley, Raven Press, New York, N.Y pp.1-10, 1993.

388. Roizman B. and Sears, A.E. Herpes simplex viruses and their replication. In: ***The human herpesviruses***. Edited by B. Roizman, C. Lopez and R. J. Whitley, Raven Press, New York, N.Y pp. 11-68, 1993.

389. Poon, A. P. W. and Roizman, B. Characterization of a temperature-sensitive mutant of the U_L15 open reading frame of herpes simplex virus-1. J. Virol. **67**:4,497-4,503, 1993.

390. Purves, F.C., Ogle, W.O., and Roizman, B. Processing of the herpes simplex virus regulatory protein $\alpha22$ mediated by the U_L13 protein kinase determines the accumulation of a subset of α and γ mRNAs and proteins in infected cells. Proc. Nat Acad. Of Sci. (USA) **90**: 6,701-6,705, 1993.

391. Chang, Y.E. and Roizman, B. The product of U_L31 gene of herpes simplex virus 1 is a nuclear phosphorprotein which partitions with the nuclear matrix. J. Virol. **67**: 6,348-6,356, 1993.

392. Fawl, R.L. and Roizman, B. Induction of reactivation of herpes simplex virus in murine sensory ganglia in vivo by cadmium. J. Virol. **67**:7,025-7,031, 1993.

393. Roller, R.J. and Roizman, B. A Herpes Simplex Virus-1 U_S11-Expressing Cell Line is Resistant to herpes simplex virus infection at a step in viral entry mediated by glycoprotein D. J. Virol. **68**:2,830-2,839, 1994.

394. Baines, J.D., Koyama, A.H., Huang T. and Roizman. The U_L21 Gene Products of Herpes Simplex Virus 1 are dispensable for growth in cultured cells. J. Virol., **68**:2,929-2,936, 1994.

395. Chou, J. and Roizman, B. Herpes simplex virus 1 $\gamma_1$34.5 gene function which blocks the host response to infection, maps in the homologous domain of the genes expressed during growth arrest and DNA damage. Proc. Nat. Acad. Sci. (USA) **91**:5,247-5,251, 1994.

396. Brandimarti, R., Huang, T., Roizman, B. and Campadelli-Fiume G. Mapping of herpes simplex virus 1 genes with mutations which overcome host restrictions to infection. Proc. Nat Acad. Sci. (USA), **91:** 5,406-5,410, 1994.

397. Ward, P. L. and Roizman, B. Herpes simplex genes: the blueprint of a successful human pathogen. Trends in Genetics, **10:**267-274, 1994.

398. Blaho, J. A., Mitchell, C. and Roizman, B. An amino acid sequence shared by the herpes simplex virus 1 α regulatory proteins 0, 4, 22, and 27 predicts the nucleotidylylation of U_L21, U_L31, U_L47, and U_L49 gene products. J. Bio. Chem. **269**:17,401-17,410, 1994.

399. Lagunoff, M. and Roizman, B. Expression of a herpes simplex virus 1 open reading frame antisense to the $\gamma_1$34.5 gene and transcribed by an RNA 3' coterminal with the unspliced latency- associated transcript. J. Virol. **68**:6,021-6,028, 1994.

400. Fawl, R. L. and Roizman, B. The Molecular Basis of Herpes Simplex Virus Pathogenicity. Seminars in Virology, **5**:261-271, 1994.

401. Avitabile, E., Ward, P.L., Di Lazzaro, C., Torrisi M.R., Roizman, B., and Campadelli-Fiume, G., The herpes simplex virus U_L20 protein compensates for the differential disruption of exocytosis of virions and membrane glycoproteins associated with the fragmentation of the Golgi apparatus. J. Virol. **68**:7,397-7,405, 1994.

402. Ward, P.L., Campadelli-Fiume, G., Avitabile, E., Roizman B. The localization and putative function of the U_L20 membrane protein in cells infected with herpes simplex virus 1. J. Virol. **68**:7,406-7,011, 1994.

403. Baines, J.D., Poon, A.P.W., Rovnak J., and Roizman B. The herpes simplex virus 1 U_L15 Gene encodes two proteins and is required for cleavage of genomic viral DNA. J. Virol **68**:8,118-8,124, 1994.

404. Chou, J., Poon A.P.W., Johnson, J., and Roizman, B. Differential response of human cells to deletions and stop codons in the $\gamma_1$34.5 gene of herpes simplex virus. J. Virol, **68**:8,304-8,311, 1994.

405. Mitchell, C., Blaho, J. D. and Roizman B. Casein kinase II specifically nucleotidylylates in vitro the amino acid sequence of the protein encoded by the α22 gene of the herpes simplex virus 1. Proc. Nat. Acad. Sci. (USA) **91**:11,864-11,868, 1994.

406. Baines J.D., Jacob, R.J., Simmerman, L. and B, Roizman. The herpes simplex virus 1 U_L11 proteins are associated with cytoplasmic and nuclear membranes, and nuclear bodies of infected cells J. Virol. **69**:825-833, 1995.

407. Chambers, R., Gillespie, G.Y., Soroceanu, L., Andreansky, S., Chatterjee, S., Chou, J., Roizman, B., and Whitley, R. J. Comparison of genetically engineered herpes simplex viruses for the treatment of brain tumors in a scid mouse model of human malignant glioma. Proc. Nat. Acad. Sci. (USA) **92:**1,411-1,415, 1995.

408. Bohenzky, R.A., Lagunoff, M., Roizman, B., Wagner, E.K., and Silverstein, S. Two overlapping transcriptional units which extend across the L-S junction of herpes simplex virus 1. J. Virol. **69**:2,889-2,897, 1995.

409. Leopardi, R., Michael, N., and Roizman B. Repression of the herpes simplex virus 1 α4 gene by its gene product (ICP4) within the context of the viral genome is conditioned by the distance and stereoaxial alignment of the ICP4 DNA binding site relative to the TATA box. J. Virol.**69**:3,042-3,048, 1995.

410. Lagunoff, M. and Roizman, B. The regulation of synthesis and properties of the protein product of the open reading frame P of the herpes simplex virus 1 genome. J. Virol. **69:**3,615-3,623, 1995.

411. Chou, J., Chen J-J., Gross, M., and Roizman B. Association of a novel M_r90,000 phosphoprotein with PKR kinase in cells exhibiting enhanced phosphorylation of eIF-2α and premature shutoff of protein synthesis after infection with γ134.5$^-$ mutants of herpes simplex virus 1. Proc. Nat. Acad. Sci. (USA) **92**: 10,516-10,520, 1995.

412. Avitabile, E., Di Gaeta, S., Torrisi, M. R., Ward, P. L., Roizman B., and Campadelli-Fiume, G. The redistribution of microtubules and Golgi apparatus in herpes simplex virus infected cells and their role in viral exocytosis. J. Virol. **69**:7,472-7,482, 1995.

413. Poon A.P.W. and Roizman, B. The phenotype in vitro and in infected cells of herpes simplex virus 1 α-trans-inducing factor (VP16) carrying temperature sensitive mutations introduced by substitution of cysteines. J. Virol. **69**:7,658-7,667, 1995.

414. Roizman, B. and Palese, P. The Multiplication of Viruses: An overview. In: Fields' ***Virology*** 3rd Edition, B.N. Fields, D.M. Knipe, P. Howley, R.M. Chanock, M.S. Hirsch, J.L. Melnick, T. P. Monath and B. Roizman, Editors, Lippincott-Raven Press, New York, 1996, pp101-111.

415. Roizman B. The Family Herpesviridae. In: Fields' ***Virology*** 3rd Edition, B.N. Fields, D.M. Knipe, P.

Howley, R.M. Chanock, M.S. Hirsch, J.L. Melnick, T. P. Monath and B. Roizman, Editors, Lippincott-Raven Press, New York, N.Y, 1996, pp2,221-2,230.

416. Roizman B. and Sears, A.E. The replication of Herpes simplex viruses. In: Fields' ***Virology*** 3rd Edition, B.N. Fields, D.M. Knipe, P. Howley, R.M. Chanock, M.S. Hirsch, J.L. Melnick, T. P. Monath and B. Roizman, Editors, Lippincott-Raven Press, New York, N.Y., 1996, pp2,231-2,295.

Reprinted in ***Fundamental Virology*** 3rd Edition, B.N. Fields, D.M. Knipe, P. Howley, R.M. Chanock, J.L. Melnick, T. P. Monath, B. Roizman, and Stephen Straus, Editors, Lippincott-Raven Press, New York, NY, 1996, pp1,043-1,107.

417. He, B., Chou J., Liebermann, D.A., Hoffman B., and Roizman, B. The carboxyl terminus of the murine MyD116 gene substitutes for the corresponding domain of the $\gamma_1$34.5 gene of herpes simplex virus to preclude the premature shutoff of total protein synthesis in infected human cells. J. Virol. **70**:84-90, 1996.

418. Carter, K.L. and Roizman, B. The promoter and transcriptional unit of a novel herpes simplex virus 1 α gene is contained in, and encodes a protein in frame with, the open reading frame of the α22 gene. J. Virol. **70**:172-178, 1996.

419. Lagunoff, M., Randall, G., and Roizman, B. The phenotypic properties of Herpes simplex virus 1 containing a derepressed ORF P gene. J. Virol. **70**: 1,810-1,817, 1996.

420. Leopardi, R. and Roizman, B. Functional interaction and co-localization of the herpes simplex virus 1 major regulatory protein ICP4 with EAP, a nucleolar-ribosomal protein. Proc. Nat. Acad. Sci., (USA) **93**:4,583-4,587, 1996.

421. Ward, P.L., Barker, D.E., and Roizman, B. A novel herpes simplex virus 1 gene U_L43.5 maps antisense to the U_L43 gene and encodes a protein which colocalizes in nuclear structures with capsid proteins. J. Virol. **70**:2,684-2,690, 1996.

422. Roller, R.J., Monk L., Stuart, D., and Roizman, B. Structure and function in the herpes simplex virus 1 rna binding protein u_s11: Mapping of the domain required for ribosomal and nucleolar association and rna binding in vitro. J. Virol. **70**:2,842-2,851, 1996.

423. Chang, Y.E., Poon, A.P.W., and Roizman, B. The properties of the protein encoded by the U_L32 open reading frame of herpes simplex virus 1. J. Virol. **70**:3,938-3,946, 1996.

424. Ward, P.L., Ogle, W.O., and Roizman, B. Assemblons: dense nuclear structures defined by aggregation of proteins associated with immature capsid proteins of herpes simplex virus 1. J. Virol. **70**:4,623-4,631, 1996.

425. Leopardi, R. and Roizman, B. The herpes simplex virus major regulatory protein ICP4 blocks apoptosis induced by the virus or by hyperthermia. Proc. Nat. Acad. Sci. (USA) **93**:9,583-9,587, 1996.

426. Bruni, R. and Roizman, B. ORF P – a herpes simplex virus gene repressed during productive infection encodes a protein which binds a splicing factor and reduces synthesis of viral proteins made from spliced mRNA. Proc. Nat. Acad. Sci. (USA) **93**:10,423-10,427, 1996.

427. Roizman, B. The function of herpes simplex virus genes: a primer for genetic engineering of novel

vectors. Proc. Nat. Acad. Sci. (USA) **93**:11307-11,312, 1996.

428. Andreansky, S.S., He, B., Gilespie, Y., Soroceanu, L., Markert, J., Roizman, B., and Whitley, R.J. The application of genetically engineered herpes simplex viruses to the treatment of experimental animal tumors. Proc. Nat. Acad. Sci. (USA) **93**:11,313-11,318, 1996.

429. Carter, K.L., Ward, P.L., and Roizman, B. Characterization of the products of the U_L43 gene of herpes simplex virus 1: Potential implications for regulation of gene expression by antisense transcription. J. Virol. **70:**7,663-7,668, 1996.

430. Carter, K.L., and Roizman, B. Alternatively spliced mRNAs predicted to yield frame-shift proteins and stable intron 1 RNAs of the herpes simplex virus 1 regulatory gene α0 accumulate in the cytoplasm of infected cells. Proc. Nat. Acad. Sci. (USA) **93**:12,535-12,540, 1996.

431. Whitley, R.J., and Roizman, B. Herpes simplex viruses. In ***Clinical Virology***. Richman, D., Whitley, R.J, and Hayden, F.G, Eds. Churchill-Livingston, NY, NY, pp375-410, 1996.

432. Ng, T.I., Talarico, C., Burnette, T.C., Biron, K., and Roizman, B. Partial substitution of the functions of the herpes simplex virus 1 U_L13 gene by the human cytomegalovirus U_L97 gene. Virol. **225**:347-358, 1997.

433. Nalwanga, D., Rempel, S., Roizman, B., and Baines, J. The U_L16 gene product of herpes simplex virus 1 is a virion protein that colocalizes with intranuclear capsid proteins. Virology **226**:236-242, 1997.

434. Leopardi, R., Ward, P.L., Ogle, W.O., and Roizman, B. Association of herpes simplex virus regulatory protein ICP22 with transcriptional complex containing EAP, ICP4, RNA polymerase II and viral DNA requires post translational modification by the U_L13 protein kinase. J. Virol. **71**:1,133-1,139, 1997.

435. Kawaguchi, Y., Bruni, R., and Roizman, B. Interaction of herpes simplex virus 1 α regulatory protein ICP0 with elongation factor EF-1δ: ICP0 affects translational machinery. J. Virol. **71**:1,019-1,024, 1997.

436. He, B., Gross, M., and Roizman, B. The $\gamma_1$34.5 protein of herpes simplex virus 1 complexes with protein phosphatase 1α to dephosphorylate the α subunit of the eIF-2 translation initiation factor and preclude the shutoff of protein synthesis by double stranded RNA activated protein kinase (PKR). Proc. Nat. Acad. Sci. (USA) **94**:843-848, 1997.

437. Poon A.P.W. and Roizman, B. Differentiation of the shutoff of protein synthesis by virion host shutoff and mutant $\gamma_1$34.5 genes of herpes simplex virus 1. Virology **229**:98-105, 1997.

438. Andreansky, S., Soroceanu. L., Flote, E.R., Chou, J., Markert, J.M., Gillespie, G.Y., Roizman, B., and Whitley, R.J. Evaluation of genetically engineered herpes simplex viruses as oncolytic agents for human malignant brain tumors. Cancer Research **57**:1,502-1,509, 1997.

439. Roizman, B., and Ward, L.P. Not so simplex: how virologists are matching wits with our unwelcome lifetime guests. Odyssey, **3**:22-29, 1997.

440. Markovitz, N., Baunoch, D., and Roizman, B. The range and distribution of murine central nervous system cells infected with the $\gamma_1$34.5$^-$ mutant of herpes simplex virus 1. J. Virol. **71**:5,560-5,569, 1997.

441. He, B., Chou, J., Brandimarti, R., Mohr, I., Gluzman, Y. and Roizman, B. Suppression of the phenotype of $\gamma_1$34.5$^-$ herpes simplex virus 1: Failure of activated RNA dependent protein kinase to shutoff protein synthesis is associated with a deletion in the domain of the α47 gene. J. Virol. **71**:6,049-6,054, 1997.

442. Ng, T.I., Chang, Y.E. and Roizman, B. Infected cell protein 22 of herpes simplex virus 1 regulates the expression of virion host shutoff gene U_L41. Virology **234**:226-234, 1997.

443. Leopardi, R., Van Sant, C., and Roizman, B. The herpes simplex virus 1 protein kinase U_S3 is required for protection from apoptosis induced by the virus. Proc. Nat Acad. Sci. (USA) **94**:7,891-7,896, 1997.

444. Ogle, W.O., Ng, T.I., Carter, K.L. and Roizman, B. The U_L13 protein kinase and the infected cell type are determinants of posttranslational modification of ICP0. Virology **235**:406-413, 1997.

445. Kawaguchi, Y., Van Sant, C. and Roizman, B. Herpes simplex virus-1 α regulatory protein ICP0 interacts with and stabilizes the cell-cycle regulator cyclin D3. J. Virol. **71**:7,328-7,336, 1997.

446. Randall, G., and Roizman, B. Transcription of the derepressed ORF P of herpes simplex virus 1 precludes the expression of the antisense $\gamma_1$34.5 gene and may account for the attenuation of the mutant virus. J. Virol., **71**:7,750-7,757, 1997.

447. Randall, G., Lagunoff, M., and Roizman, B. The product of ORF O located within the domain of herpes simplex virus 1 genome transcribed during latent infection binds to and inhibits in vitro binding of ICP4 to its cognate DNA site. Proc. Nat. Acad. Sci., (USA) **94**:1,0379-10,384, 1997.

448. Mitchell, C., Blaho, J.A., McCormick, A. L., and Roizman, B. The Nucleotidylylation of herpes simplex virus 1 regulatory protein α22 by human casein kinase II. J. Biol. Chem. **272**:25,394-25,400, 1997.

449. Chang, Y.E., Van Sant, C., Krug, P.W., Sears, A.E., and Roizman, B. The null mutant of the U_L31 gene of herpes simplex virus 1: Construction and phenotype in infected cells. J. Virol. 71:8307-8315, 1997.

450. Roizman, B. Herpesviruses. In: ***Encyclopedia of Human Biology*** 2nd Edition, edited by R. Dulbecco, Academic Press, N.Y. **4**:557-564, 1997.

451. Brandimarti, R. and Roizman,B. U_S9, a stable lysine-less herpes simplex virus 1 protein, is ubiquitinated prior to packaging into virions, and associates with proteasomes. Proc. Nat. Acad. Sci. (USA) **94**:13,973-13,978, 1997.

452. Blaho, J.A. and Roizman, B. Analyses of herpes simplex virus proteins for post translational modifications and enzyme functions. Methods in Molecular Biology Vol X. Herpes simplex viruses edited by S. M. Brown and A. R. MacLean. Herpes simplex virus protocols, in ***Methods in Molecular Biology***, Humana Press, 237-256, 1997

453. Ng, T.I Ogle, W.O. and Roizman, B. U_L13 protein kinase of herpes simplex virus 1 complexes with and mediates the phosphorylation of the viral of the viral Fc receptor: glycoproteins E and I. Virology **241**:37-48, 1998.

454. Kawaguchi, Y. Van Sant, C. and Roizman, B. Eukaryotic elongation factor 1δ is hyper-phosphorylated by the protein kinase encoded by the U_L13 gene of herpes simplex virus 1. J. Virol. **72**: 1,731-1,736, 1998.

455. Ward P.L., Avitabile, E., Campadelli-Fiume, G. and Roizman, B. Conservation of the architecture of the Golgi apparatus related to a differential organization of microtubules in polykaryocytes induced by syn$^-$ mutants of herpes simplex virus 1, Virology **241**:189-199, 1998.

456. Andreansky, S., He, B., van Cott, J., McGhee, J. V., Markert, J.M., e, Y., Roizman, B. and Whitley, R. J. Treatment of intracranial gliomas in immunocompetent mice using herpes simplex viruses that express murine interleukins. Gene Ther. **5**:121-130, 1998

457. Advani, S.J., Sibley, G.S., Song, P.Y., Hallahan, D.E., Kataoka, Y., Roizman, B, and Weichselbaum, R. R. Enhancement of replication of genetically engineered herpes simplex viruses by ionizing radiation: a new paradigm for destruction of therapeutically intractable tumors. Gene Ther. **5**:160-165, 1998.

458. Whitley, R. J., Kimberlin, D. W., and Roizman B. Herpes simplex viruses. Clinical Infectious Diseases **28**:541-555, 1998

459. Galvan, V. and Roizman, B. Herpes simplex virus 1 induces and blocks apoptosis at multiple steps during infection and protects cells from exogenous inducers in a cell-type dependent manner. Proc. Nat. Acad. Sci. USA **95**:3,931-3,936, 1998.

460. Chang, Y-E, Menotti, L., Filatov E., Campadelli-Fiume, G. and Roizman, B. $U_L27.5$ is a novel γ_2 gene antisense to the HSV-1 gene encoding glycoprotein B. J. Virol. **72**:6056-6064, 1998.

461. Cassady K. A. , Gross, M. and Roizman B. The second-site mutation in the herpes simplex virus recombinants lacking the $\gamma_1$34.5 genes preclude shutoff of protein synthesis by blocking the phosphorylation of eIF-2α. J. Virol. **72**:7005-7011, 1998

462. He, B., Gross, M., and Roizman, B. The $\gamma_1$34.5 protein of herpes simplex virus 1 has the structural and functional attributes of a protein phosphatase 1 regulatory subunit and is present in a high molecular weight complex with the enzyme in infected cells. J. Biol. Chem. **273**:20,737-20,743, 1998

463. Bruni, R. and Roizman, B. The herpes simplex virus 1 regulatory protein ICP22 interacts with a new cell cycle-regulated factor and accumulates in a cell cycle-dependent fashion in infected cells. J. Virol. **72**:8525-8531, 1998.

464. Cassady, K.A., Gross, M. and Roizman, B. The herpes simplex virus U_S11 protein effectively compensates for the $\gamma_1$34.5 gene if present before activation of protein kinase R by precluding its phosphorylation and that of the α subunit of eukaryotic translation initiation factor eIF-2. J. Virol. **72**: 8620-8626, 1998.

465. Ward, P.L., and Roizman, B. Evasion and Obstruction: The central strategy of the interaction of human herpesviruses with host defenses. In ***Molecular Immunology of Herpesviruses,*** H. Fredman, P. Medveczky, and M. Bendinelli, Ed. In series ***Infectious Agents and Pathogenesis*** Plenum Press, N.Y. pp 1-32, 1998.

466. Perbal, B., Martineries, C., Sainson, R., Werner, M., He, B., and Roizman, B. The carboxyl-terminal (CT) domain of NOVH is sufficient to promote interaction with fibrulin C: a clue for the role of NOVH in cell adhesion signaling. Proc. Nat. Acad. Sci. (USA) **96**:869-874, 1999.

467. Galvan, V., Brandimarti, R., and Roizman, B. Herpes simplex virus 1 blocks caspase-3-independent

and caspase-dependent pathways to cell death. J. Virol. **73**:3219-3226, 1999.

468. Bruni, R., Fineschi, B., Ogle, W.R and Roizman, B. A novel cellular protein, p60, interacting with both herpes simplex virus 1 regulatory proteins ICP22 and ICP0 is modified in a cell type-specific manner and is recruited to the nucleus after infection. J. Virol. **73**:3810-3817, 1999.

469. Ogle, W. O., and Roizman, B. The functional anatomy of the herpes simplex virus 1 overlapping genes encoding the infected cell protein No 22 and $U_S1.5$ protein. J. Virol, **73**:4305-4315, 1999.

470. Kawaguchi, Y., Matsumura, T., Roizman, B. and Hirai, K. The cellular elongation factor 1δ is modified in cells infected with representative alpha-, beta- or gamma herpesviruses. J. Virol. **73**:4456-4460, 1999.

471. Jahedi, S., Markovitz, N. S., Filatov, F and Roizman, B. Colocalization of the herpes simplex virus 1 U_L4 protein with infected cell protein 22 in small dense nuclear structures formed prior to onset of DNA synthesis. J. Virol. **73**:5132-5136, 1999.

472. Advani, S.J. Ching, S.M. Yan, S. Y. Gillespie, G.Y. Markert, J.M. Whitley, R.J. Roizman,B. and Weichselbaum, R. R. Replication-competent non-neuroinvasive genetically engineered herpes virus is highly effective in the treatment of therapy-resistant experimental human tumors. Cancer Res. **59**:2055-2058, 1999.

473. Bradley, J.D., Kataoka, Y., Advani, S., Chung, S.M., Arani, R.B., Gillespie, G.Y., Whitley, R.J., Markert, J.M., Roizman, B., and Weichselbaum R. R. Ionizing radiation improves survival in mice bearing intracranial high-grade gliomas injected with genetically modified herpes simplex virus. Clin. Cancer Research **5**:15177-1522, 1999.

474. McCormick L., Igarashi, K. and Roizman, B. Posttranscriptional regulation of U_S11 in cells infected with a herpes simplex virus 1 recombinant lacking both 222 base pair domains containing S-component origins of DNA synthesis. Virology **259:**286-298, 1999.

475. Van Sant, C., Kawaguchi, Y. and Roizman, B. A single amino acid substitution in the cyclin D binding domain of the infected cell protein No.0 abrogates the neuroinvasiveness of herpes simplex virus without affecting its ability to replicate. Proc. Nat Acad. Sci. (USA) **96**:8184-8189, 1999.

476. Roizman, B. HSV gene functions:what we have learned that could be generally applicable to its near and distant cousins? Proceedings of the Second International Workshop on molecular pathogenesis or Marek's Disease. Smolence Castle, Slovak Republic, Aug. 8-11, 1998. Acta Virologica **43**: 75-80, 1999

477. Ryncarz, A.J., Goddard, J., Wald, A., Huang, M-L., Roizman, B., and Corey, L. Development of a high-throughput quantitative assay for detecting herpes simplex virus DNA in clinical samples. J. Clin. Microbio. **37**:1941-1947, 1999

478. Talarico, C. L., Burnette, T. C., Miller, W. H., Smith, S. L., Davis, M. G., Stanat, S. C., Ng, T. I., He, Z. , Coen, D. M., Roizman, B. and Biron K. K. Acyclovir is phosphorylated by the human cytomegalovirus UL97 protein. Antimicrobial Agents and Chemotherapy, **43**:1941-1956, 1999.

479. Markovitz, N. Filatov, F. and Roizman, B. The U_L3 protein of herpes simplex virus 1 is translated predominantly from the second in-frame methionine codon and is subject to at least two posttranslational

modifications. J. Virol. **73**:8010-8013, 1999.

480. Khodarev, N.N., Advani, S.J., Gupta, N., Roizman, B. and Weichselbaum, R.R. Accumulation of specific RNAs encoding transcriptional factors and stress response proteins against a background of severe depletion of cellular RNAs in cells infected with herpes simplex virus 1. Proc. Nat. Acad. Sci. (USA) **96**:12062-12067, 1999

481. Advani, S.J., Brandimarti, R., Weichselbaum, R. R. and Roizman, B. The disappearance of cyclins A and B and the increase in the activity of the G2/M phase cellular kinase cdc2 in herpes simplex virus 1 – infected cells requires the expression of $\alpha 22/U_S1.5$ and U_L13 viral genes. J. Virol. **74**:8-15, 2000

482. Markovitz, N.S., and Roizman, B. Small dense nuclear bodies are the site of localization of herpes simplex virus 1 U_L3 and U_L4 proteins and of infected cell protein No 22 but only when the latter protein is present. J. Virol. **74**:\523-528, 2000.

483. Ye, G-J, Vaugham, K.T., Vallee, R.B., and Roizman, B. The herpes simplex virus 1 U_L34 protein interacts with a cytoplasmic dynein intermediate chain and targets nuclear membrane. J. Virol, **74**:1355-1363, 2000.

484. Ward, P.L., Taddeo, B, Markovitz, N.S. and Roizman, B. Identification of a novel expressed open reading frame situated between genes U_L20 and U_L21 of the herpes simplex virus 1 genome Virology: **266:**275-285, 2000.

485. Galvan V., Brandimarti, R., Munger J., and Roizman, B. Bcl-2 blocks a caspase-dependent pathway of apoptosis activated by HSV-1 infection in Hep-2 cells. J. Virol. **74**:1931-1938, 2000.

486. Markert, J.M., Gillespie, G. Y., Weichselbaum, R.R., Roizman, B., and Whitley R. J. Genetically engineered HSV in the treatment of malignant glioma: a review. Rev. Med. Virol. **10**:17-30, 2,000

487. Advani, S. J., Weichselbaum, R.R., and Roizman, B. E2F proteins are post translationally modified concomitant with a reduction in nuclear binding activity in cells infected with herpes simplex virus 1. J. Virol. **74**:7842-7850, 2,000.

488. Markovitz, N.S. and Roizman, B. Replication competent herpes viral vectors for cancer therapy. Advances in Virus Res. **55**:409-424, 2000.

489. Randall, G., Lagunoff M., and Roizman, B. Herpes simplex virus 1 ORF O and ORF P are not necessary for the establishment of latent infection in mice. J. Virol. **74**:9019-9027, 2000

490. Zhou, G. and Roizman, B. Wild-type herpes simplex virus 1 blocks programmed cell death and release of cytochrome c but not the translocation of mitochondrial apoptosis inducing factor to the nuclei of human embryonic fibroblasts. J. Virol. **74**:9048-9053, 2000

491. Advani, S. J., Weichselbaum R.R., and Roizman. The role of cdc2 in the expression of herpes simplex virus genes. Proc. Nat Acad. Sci. (USA) **96:**10996-11001, 2000.

492. Ye, G.-J., and Roizman, B. The essential protein encoded by the U_L31 gene of herpes simplex virus 1 is dependent for its stability on the presence of U_L34 protein. Proc. Nat. Acad. Sci. (USA) **96**: 11002-11009, 2,000.

493. Poon, A.P.W, Ogle, W.O. and Roizman, B. The posttranslational processing of infected cell protein 22 mediated by viral protein kinases is sensitive to amino acid substitutions at distant sites and can be cell-type specific. J. Virol. **74:**11210-11214, 2000

494. Zhou, G. Galvan, G., Campadelli-Fiume, G and Roizman, B. Glycoproteins D or J delivered in trans block apoptosis in SK-N-SH cells induced by a herpes simplex virus 1 mutant lacking intact genes expressing both glycoproteins. J. Virol. **74**:11782-11791, 2000

495. Van Sant, C., Lopez, P., Advani, S.J. and Roizman, B. The role of cyclin D3 in the biology of the infected cell protein No. 0 of herpes simplex virus 1. J. Virol. **75**:1888-1898, 2001.

496. Roizman, B. and Whitley, R.J. The Nine Ages of Herpes Simplex Viruses. Herpes **8**:23-26, 2001.

497. Kawaguchi, Y., Tanaka, M., Yokoymama, A., Matsuda, G., Kato, K., Kagawa, H., Hirai, K., and Roizman, B. Herpes Simplex Virus 1 α Regulatory Protein ICP0 Functionally Interacts with a Cellular Transcription Factor BMAL1. Proc. Nat. Acad. Sci. (USA) **98**:1877-1882, 2001.

498. Lopez, P., Van Sant, C and Roizman, B. Requirements for the nuclear-cytoplasmic translocation of the infected cell protein 0 of herpes simplex virus 1. J. Virol. **75:**3832-3840, 2001.

499. Whitley, R. J., and Roizman, B. A new look at herpes simplex viruses: from structure and function to treatment and application. Lancet, **357**:1513-1518, 2001.

500. Munger,J., Chee, A., and Roizman, B. The U_S3 protein kinase blocks apoptosis induced by the d120 mutant of herpes simplex virus 1 at a pre-mitochondrial stage. J. Virol. **75**:5491-5497, 2001.

501. Broberg, E., Setala, N., Roytta, M., Salmi, A., Eralinna, J-P., He, B., Roizman, B., Hukkanenen, V. Expression of interleukin 4 but not of interleukin 10 from a replicative herpes simplex virus type 1 viral vector precludes experimental allergic encephalomyelitis. Gene Therapy, **8**:769-777, 2001.

502. Zhou, G., and Roizman, B. The domains of glycoprotein D required to block apoptosis depend on whether glycoprotein D is present in the virions carrying herpes simplex virus 1 genome lacking the gene encoding the glycoprotein. J. Virol., **75:**6166-6172, 2001

503. Weichselbaum, R. R., Kufe, D.W., Advani, S.J. and Roizman, B. Molecular targeting of Gene therapy and radiotherapy. Acta Oncologica, **40**:735-738, 2001.

504. Roizman B, and Pellett, P. E. The Family Herpesviridae. In: Fields' ***Virology*** 4rd Edition, D.M. Knipe, P. Howley, Diane E Griffin, Robert A Lamb, Malcom A. Martin, B. Roizman, and Stephen E. Straus, Editors, Lippincott-Williams and Wilkins, New York, N.Y, 2001, pp2381-2397, 2001.

505. Roizman B. and Knipe, D.M. The replication of Herpes simplex viruses. In: Fields' ***Virology*** 4rd Edition, D.M. Knipe, P. Howley, D. E. Griffin, R. A. Lamb, M. A. Martin, B. Roizman, and S. E. Straus, Editors, Lippincott-Williams and Wilkins, New York, N.Y, 2399-2459, 2001

506. Advani, S.J., Hagglund, R., Weichselbaum, R. R., and Roizman, B. The posttranslational processing of infected cell proteins 0 and 4 of herpes simplex virus 1 is sequential and reflects the subcellular compartment in which the proteins localize. J. Virol. **75**:10326-10333, 2001.

507. Van Sant, C., Hagglund, R., Lopez, P. and Roizman, B. The infected cell protein 0 of herpes simplex virus 1 dynamically interacts with proteasomes, binds and activates the cdc34 E2 ubiquitin conjugating enzyme and possesses in vitro E3 ubiquitin ligase activity. Proc. Nat. Acad. Sci. (USA) **98**:8815-8820, 2001.

508. Sciortino, M. T., Suzuki, M., Taddeo, B. and Roizman, B. RNAs extracted from herpes simplex virus 1 virions: apparent selectivity of viral but not cellular RNAs packaged in virions. J. Virol. **75**:8105-8116, 2001

509. Munger, J. and Roizman, B. The U_S3 protein kinase of herpes simplex virus 1 mediates the post-translational modification of BAD and prevents BAD-induced programmed cell death in the absence of other viral proteins. Proc. Nat. Acad. Sci. (USA) **98**:10410-10415, 2001.

510. Advani, S.J., Weichselbaum, R. R., and Roizman, B. cdc2 cyclin-dependent kinase binds and phosphorylates herpes simplex virus 1 U_L42 DNA synthesis processivity factor. J. Virol. **75**:10326-10333, 2001

511. Khodarev, N. N., Park, J. O., Yu, J., Gupta, N. Nodzenski, E., Roizman, B. and Weichselbaum, R.R. Dose-dependent and independent temporal patterns of gene responses to ionizing radiation in normal and tumor cells and tumor xenografts. Proc. Nat. Acad. Sc. (USA) **98**:12665-12670, 2001.

512. Skelly, C.L., Curi, M.A., Meyerson, S.L., Hari, D., Vosicky, J., Advani, S.J., Mauceri, H., Glagov, S., Roizman, B., Weichselbaum, R.R., Schwartz, L.B. Prevention of restenosis by a herpes simplex virus mutant capable of controlled long-term expression in vascular tissue in vivo. Gene therapy, **8**:1840-1846, 2001.

513. Hagglund, R., Munger, J., Poon A. P. W., and Roizman, B. The U_S3 protein kinase of herpes simplex Virus 1 blocks caspase 3 activation induced by the products of $U_S1.5$ and U_L13 genes and modulates expression of transduced $U_S1.5$ open reading frame in cell-type specific manner. J. Virol. **76**:743-754, 2002

514. Cassady, K.A., Gross, M., G. Gillespie, G. Y., and Roizman, B. Second-site mutation outside of the U_S10-12 domain of $\Delta\gamma_1 34.5$ herpes simplex virus 1 recombinant blocks the shutoff of protein synthesis induced by activated protein kinase R and partially restores neurovirulence. J. Virol. **76**:942-949, 2002.

515. Chung, S.M., Advani, S.J., Bradley, J.D., Kataoka, Y., Vashisthan K., Yan, S.Y., Markert, J.M., Gillespie, G.Y., Whitley, R.J., Roizman, B., and Weichselbaum, R.R. The use of genetically engineered herpes simplex virus R7020 with ionizing radiation for experimental hepatoma. Gene Therapy **9**:75-80, 2002.

516. Hagglund, R., Van Sant, C., Lopez, P., and Roizman B. Herpes simplex virus 1 infected cell protein 0 contains two E3 ubiquitin ligase sites specific for different E2 ubiquitin conjugating enzymes. Proc. Nat. Acad. Sci. (USA) **99**:631-666, 2002.

517. Zhou, G. and Roizman, B. Cation-independent mannose 6-phosphate receptor blocks apoptosis induced by herpes simplex virus 1 mutants lacking glycoprotein D and is likely the target of anti-apoptotic activity of the glycoprotein. J. Virol. **76**:6197-6204, 2002.

518. Whitley, R.J. and Roizman. B. Herpes simplex virus vaccines: Is a vaccine tenable? J. Clin. Invest. **110**:145-151, 2002.

519. Sciortino, M.T., Taddeo, B., Poon, A. P. W., Mastino, A., and Roizman, B. Of the three tegument proteins that package mRNA in herpes simplex virions, one (VP22), transports the mRNA to uninfected cells for expression prior to viral infection. Proc. Nat Acad. Sci. (USA) **99**:8318-8323, 2002.

520. Hagglund, R. and Roizman, B. Characterization of the novel E3 ubiquitin ligase encoded in exon 3 of herpes simplex virus 1 infected cell protein 0. Proc. Nat Acad. Sci. (USA) **99**:7889-7894, 2002.

521. Trgovcich, J., Johnson, D., and Roizman, B. Cell surface MHC class II proteins are regulated by the products of the $\gamma_1$34.5 and U_L41 genes of herpes simplex virus 1. J. Virol, in **76**:6974-6986, 2002

522. Whitley, R.J. and Roizman, B. Herpes simplex viruses. Clinical Virology, 2nd ed. D. D. Richman, R..J. Whitley, and F. H. Hyden, Ed. ASM Press, Washington D.C. p375-401, 2002.

523. Lopez, P., Jacob, R.J., and Roizman, B. Overexpression of promyelocytic leukemia protein (PML) precludes the dispersal of ND10 structures and has no effect on the accumulation of infectious herpes simplex virus 1 or its proteins. J. Virol. **76**:9255-9367, 2002. 2002.

524. Poon, A.P.W., Silverstein, S.J., and Roizman, B. An early function required in cell-type-dependent manner is expressed by the genomic but not by the cDNA copy of the herpes simplex virus 1 gene encoding the infected cell protein No. 0. J. Virol.**76**:9744-9755, 2002

525. Zhou, G., and Roizman, B. The truncated forms of glycoprotein D of herpes simplex virus 1 capable of blocking apoptosis and of low efficiency entry into cells form a heterodimer dependent on the presence of a cysteine located in the shared transmembrane domains. J. Virol. **76**:11469-11475, 2002.

526. Zhou, G , Guo-Jie Ye, G-J., Debinski, W. and Roizman, B Genetic engineering of a herpes simplex virus 1 vector dependent on the IL13Rα2 receptor for entry into cells: interaction of glycoprotein D with its receptors is independent of the fusion of the envelope and the plasma membrane. Proc. Nat. Acad. Sci. (USA) **99**:15124-15129, 2002.

527. Advani, S.J.. Weichselbaum, R.R., Whitley R.J., and Roizman, B. Friendly Fire: Redirecting Herpes Simplex Virus-1 for Therapeutic Applications. Clinical Microbiol & Infect. **8**:551-563, 2002.

528. Taddeo, B., Esclatine, A., Roizman, B. The patterns of accumulation of cellular RNAs in cells infected with a wild-type and a mutant herpes simplex virus 1 lacking the virion host shutoff gene. Proc. Nat. Acad. Sci. (USA). **99**:17031-17036, 2002

529. Munger, J., Hagglund R. and Roizman, B. Infected cell protein No.22 (ICP22) is subject to proteolytic cleavage by caspases activated by a mutant that induces apoptosis. Virology **305**:364-370, 2002.

530. Zhou, G., Avitabile E., Campadelli-Fiume G., and Roizman, B. The domains of glycoprotein D required to block apoptosis are largely distinct from those involved in cell-cell fusion and binding to nectin1. J. Virol. **77**:3759-3767, 2003

531. Khodarev, N. N. Park, J., Kataoka Y., Nodzenski. E., Hellman, S., Roizman, B. Weichselbaum, R.

R., and, Pelizzari, C. A. Receiver operating characteristic analysis: a general tool for DNA array data filtration and performance estimation. Genomics **81**:202-209, 2003.

532. Advani, S.J., Weichselbaum, R.R. and Roizman, B. Herpes simplex virus 1 activates cdc2 to recruit topoisomerase IIα for post-DNA synthesis expression of late genes. Proc. Nat.Acad. Sci. (USA) **100**:4825-4830, 2003

533. Munger, J, Zhou, G., and Roizman, B. Cell death on demand: Herpes simplex viruses and apoptosis. In *Microbial Subversion of Host Cells*. C. D. O'Connor and D.G.E.Smith, ed. SGM symposium 62. Cambridge Univ. Press, 2003 p229-245.

534. Curi, M. A., Skelly, C. L., Meyerson, S. L., Baldwin, Z. K., Advani, S. J., Glagov, S, Roizman, B, Weichselbaum R. R., Schwartz L. B. Sustained inhibition of experimental neointimal hyperplasia using a genetically modified herpes simplex virus. J. Vascular Surgery **37**:1294-1300. 2003.

535. Taddeo, B., Esclatine, A., Zhang, W., and Roizman, B. The stress-inducible immediate early responsive gene IEX-1 is activated in cells infected with herpes simplex virus 1 but several viral mechanisms including 3' degradation of its RNA preclude the expression of the gene. J. Virol. **77**:6178-6187, 2003.

536. Benetti, L., Munger, J. and Roizman, B. The herpes simplex virus 1 U_S3 protein kinase blocks caspase dependent double cleavage and activation of the pro-apoptotic protein BAD. J. Virol. **77**:6567-6573, 2003.

537. Chee, A.V., Lopez, P. Pandolfi, P.P., and Roizman, B. Promyelocytic leukemia protein mediates interferon-based anti-herpes simplex virus 1 effects. J. Virol. **77**:7101-7105, 2003.

538. Gu, H. and B. Roizman. The degradation of PML and Sp100 proteins by herpes simplex virus 1 is mediated by the ubiquitin conjugating enzyme UbcH5a. Proc. Nat. Acad. Sci (USA) **100**:8963-8968, 2003.

539. Poon, A.P.W., Liang, Y. and Roizman, B. Herpes simplex virus 1 gene expression is accelerated by inhibitors of histone deacetylases in rabbit skin cells infected with a mutant carrying a cDNA copy of the infected-cell protein No.0. J. Virol. **77**:12671-12678, 2003.

540 Taddeo, B., Luo T.R., Zhang, W., and Roizman, B. The activation of NF-κB in cells productively infected with herpes simplex virus 1 is dependent on activated protein kinase R and plays no apparent role in blocking apoptosis. Proc. Nat. Acad. Sci. (USA) **100**:12408-12413, 2003.

541. Advani, S.J., Durand, L.O., Weichselbaum,R.R. and Roizman, B. Oct-1 is posttranslationally modified and exhibits reduced capacity to bind cognate sites at late times after infection with herpes simplex virus 1. J. Virol.**77**:11972-11932, 2003.

542. Hagglund, R., and Roizman, B. Herpes simplex virus 1 mutant in which ICP0 HUL-1 E3 ubiquitin ligase site is disrupted stabilizes cdc34 but degrades D type cyclins and exhibits diminished neurotoxicity. J. Virol. **77**:13194-13202, 2003.

543. Hagglund, R., and Roizman, B. The role of ICP0 in the strategy of conquest of the host cell by herpes simplex virus 1. A minireview. J. Virol. **78**:2169-2178, 2004.

544. Khodarev, N., Beckett, N., Labay, E., Darga, T., Roizman, B., and Weichselbaum, R. R. STAT1 is overexpressed in human tumors selected for radioresistance and confers protection from radiation in transduced sensitive cells. Proc. Nat Acad. Sci. (USA) **101**:1714-1719, 2004.

545. Chee, A.V. and Roizman, B. Herpes simplex virus 1 gene products occlude the interferon signaling pathway at multiple sites. J. Virol. **78**: 4185-4196, 2004.

546. Esclatine, A, Taddeo, B., Evans, L., and Roizman B. The herpes simple virus U_L41 gene dependent destabilization of cellular RNAs is selective, and may be sequence specific. Proc. Nat. Acad. Sci. (USA) **101**:3603-3608, 2004.

547. Esclatine, A., Taddeo, B. and Roizman, B. Herpes simplex virus 1 induces cytoplasmic accumulation of TIA-1/TIAR and both synthesis and cytoplasmic accumulation of Tristetraprolin – cellular proteins that bind and destabilize A-U-rich RNAs. J. Virol. **78**:8582-9592, 2004.

548. Benetti, L. and Roizman, B. The herpes simplex virus protein kinase U_S3 activates and functionally overlaps the protein kinase A to block apoptosis. Proc. Nat. Acad. Sci. (USA) **101**: 9411-9416, 2004.

549. Taddeo, B. Esclatine, A., and Roizman, B. Posttranscriptional processing of cellular RNAs in herpes simplex virus infected cells. Biochemical Society Transactions, 32697-701, 2004.

550. Taddeo, B., Zhang, W., Lakeman, F., and Roizman, B. Cells lacking NF- B or in which NF-κB is not activated vary with respect to ability to sustain herpes simplex virus 1 replication and are not susceptible to apoptosis induced by a replication incompetent virus. J. Virol. 78:11615-11621, 2004.

551. Desai, P., Gu, Haidong, and Roizman, B. Interaction between CoREST and ICPO: The inhibition of the histone deacetylase complex Chicago Biol. Investigator **2**:25-27, 2004.

552. Esclatine, A., Taddeo, B. and Roizman, B The U_L41 protein of herpes simplex virus mediates selective degradation of cellular mRNAs. Proc. Nat. Acad. Sci. (USA) 101:18165-18170, 2004.

553. Advani, J.S., and Roizman, B. The strategy of conquest: The interaction of herpes simplex virus with its host. **In Modulation of Host Gene Expression and Innate Immunity by Viruses**. P. Palese Ed. Springer, 2005. 141-161

554. Zhou, G. and Roizman, B. Characterization of a recombinant herpes simplex virus 1 targeted to enter cells via the IL13Rα2 receptor of malignant glioma cells. J. Virol.79:5272-5277, 2005.

555.. Baldwin ZK, Chandiwal A, Balasubramainian V, Pearce BJ, Curi MA, Skelly CL, Huang WW, Vosicky JE, Roizman B, Weichselbaum RR, Schwartz LB. Modulation of vascular remodeling induced by a brief intraluminal exposure to the recombinant R7020 strain of Herpes simplex-1. J. Vasc. Surg. 2005; 41:115-121.

556. Durand, L.O, Advani, S.J. and Roizman, B. The carboxyl-terminal domain of RNA POL II is phosphorylated by a complex containing cdk9 and the infected-cell protein No. 22 of herpes simplex virus 1. J. Virol, 79:6757-6762, 2005.

557. Poon, APW. And Roizman, B. The herpes simplex virus 1 ICP22 regulates the accumulation of a shorter mRNA and of a truncated U_S3 protein kinase that exhibits altered functions. J. Virol. **79**:8470-8479, 2005.

558. Liang, Y., Kurakin, A., and Roizman, B. Herpes simplex virus 1 ICP0 forms a complex with CIN85 and Cbl and mediates the degradation of EGFR from cell surfaces. Proc. Nat. Acad. Sci (USA) **102:**5838-5843, 2005

559. Gu., H., Liang, Y., Mandel, G. and Roizman, B. Components of the REST/CoREST/HDAC repressor are disrupted, modified and translocated in herpes simplex virus 1 infected cells. Proc. Nat. Acad. Sci. (USA) **102**:5771-7576, 2005

560. Roizman, B., Gu, H, and Mandel G. The first 30 minutes in the life of a virus: unREST in the nucleus. Cell Cycle 4:1019-1021, 2005

561. Mezhir, J.J., Advani, S.J., D. Smith, K.D., Darga, T.E., Poon, A.P.W , Schmidt, H. Posner, M.C., Roizman, B. and Weichselbaum, R.R. Ionizing radiation activates late herpes simplex virus 1 promoters via the p38 pathway in tumors treated with oncolytic viruses. Cancer Research **65**:9479-9484, 2005.

562. Hellums, E.K., Markert, J.M., Parker, J.N., He, B., Perbal, B., Roizman, B., Whitley, R.J., Langford, C.P., Bharara, S., and Gillespie, G.Y. Increased efficacy of an interleukin-12-secreting herpes simplex virus in a syngeneic intracranial murine glioma model. Neuro-Oncology 7:213-224, 2005.

563. Kamiyama, H., Zhou, G., and Roizman, B. Herpes simplex virus 1 recombinant virions exhibiting the amino terminal fragment of urokinase-type plasminogen activator can enter cells via the cognate receptor. Gene Ther. On line ed. Nov 2005; printed ed. 13:621-629, 2006

564. Smith, K.D., Mezhir, J.J. Bickenbach, K., Veerapong. J., Charron, J., Posner M.C., Roizman, B., and Weichselbaum R.R. Activated MEK suppresses activation of PKR and enables efficientreplication and in vivo oncolysis by $_1$34.5- mutants of herpes simplex virus 1. J. Virol. **80**:1110-1120, 2006.

565. Taddeo, B. Zhang, W. and Roizman, B. The U_L41 protein of herpes simplex virus 1 degrades RNA by endonucleolytic cleavage in absence of other cellular or viral proteins. Proc. Nat Acad. Sci. (USA) **103**:2827-2832, 2006

566. Benetti, L. and Roizman, B. Protein kinase B/Akt is present in activated form throughout the entire replicative cycle of U_S3 mutant virus but only at early times after infection with wild-type herpes simplex virus 1. J. Virol. **80**:3341-3348, 2006

567. Liang, Y. and Roizman, B. The state and role of Src family kinases in the replication of herpes simplex virus 1. J. Virol. **80**:3349-3359, 2006.

568. Poon, A.P.W., Benetti, L., and Roizman, B. U_S3 and $U_S3.5$ protein kinases of herpes simplex virus 1 differ with respect to their functions in blocking apoptosis and in virion maturation and egress. J. Virol. **80**:3752-3764, 2006.

569. Zhou, G. and Roizman, B. Construction and properties of a herpes simplex virus 1 designed to enter cells solely via the IL13 α2 receptor. Proc. Nat. Acad. Sci. **103**:5508-5513, 2006

570. Campadelli-Fiume, G., and Roizman, B. The egress of herpesviruses from cells: the unanswered questions. Letter to the Editor. J. Virol **80**:6716-1719, 2006

571. Liang, L., and Roizman, B. Herpes simplex virus 1 precludes replenishment of the short-lived receptor of tumor necrosis factor alpha by virion host shutoff-dependent degradation of its mRNA J. Virol, **80**:7756-7759, 2006

572; Poon, A.P.W., Gu, H., and Roizman, B. ICP0 and US3 protein kinase of herpes simplex virus 1 independently block histone deacetylation to enable gene expression. Proc. Nat. Acad. Sci. (USA) **103**:9993-9998, 2006.

573. Taddeo, B., and Roizman, B. The virion host shutoff (U_L41) protein of herpes simplex virus 1 is an endoribonuclease with a substrate specificity similar to that of RNase A. J. Virol. **80**:9341-9345. 2006.

574. Roizman, B., and Taddeo, B. HSV-1 and the Host Cell: a story of global conspiracies, plots and counterplots. ***In Alpha Herpesviruses; Molecular and Cellular Biology***. R Sandi-Golidin Ed. Horizon Scientific Press, pp261-282, 2006.

575. Advani, S., Mezhir, J.J., Roizman, B., and Weichselbaum,. R.R. ReVOLT: *R*adiation *E*nhanced *V*iral *O*ncolytic *T*herapy. Int. J. Radiation Oncology Biol. Phys. **66**:637-646, 2006.

576. Roizman, B., and Campadelli-Fiume, G. Herpes simplex virus. In **Fundamentals of Molecular Virology,** Edited by N. H. Acheson. Wiley, 2006 pp. 134-146.

577. Baines, J.D., Wills, E., Jacob, R. J., Pennington, J., and Roizman, B. Glycoprotein M of herpes simplex

virus 1 is incorporated into virions during budding at the inner nuclear membrane. J. Virol., **81**:800-812, 2007.

578. Pellett. P.E and Roizman, B. The Family Herpesviridae: A brief intoduction. In: Fields' ***Virology*** 5rd Edition, D.M. Knipe, P. Howley, D. E. Griffin, R. A Lamb, M. A. Martin, B. Roizman, and S. E. Straus, Editors, Lippincott-Williams and Wilkins, New York, N.Y. pp2479-2499,

579. Roizman B., Knipe, D.M., and Whitley, R.J. The replication of Herpes simplex viruses. In: Fields' ***Virology*** 5rd Edition, D.M. Knipe, P. Howley, D. E. Griffin, R. A. Lamb, M. A. Martin, B. Roizman, and S. E. Straus, Editors, Lippincott-Williams and Wilkins, New York, N.Y. 2007. pp 2501-2601,

580. Poon A.P.W. and Roizman, B. Mapping of key functions of the herpes simplex virus 1 U_S3 protein kinase: the U_S3 protein can form functional heteromultimeric structures derived from overlapping truncated polypeptides. J. Virol. **81**:1980-1889, 2007.

581. Zhou, G., and Roizman, B. Separation of receptor binding and pro-fusogenic domains of glycoprotein D of herpes simplex virus 1 into distinct interacting proteins. Proc. Nat. Acad.Sci. (USA) **104**:4142-4146, 2007.

582. Kalamvoki, M and Roizman, B. Bcl-2 blocks accretion or depletion of stored calcium, but has no effect on the redistribution of the IP3-1 receptor mediated by glycoprotein E of herpes simplex virus 1. J. Virol. **81**: 6316-6325, 2007.

583. Kari, I, Syrjänen S, Johansson B, Peri P, He B., Roizman B., and Hukkanen, V. Antisense RNA Directed to the Human Papillomavirus Type 16 E7 mRNA from Herpes Simplex Virus Type 1 Derived Vectors Is Expressed in CaSki Cells and Downregulates E7 mRNA. Virol. J 4:47-58, 2007

584. Roizman B. and Campadelli-Fiume, G. Viral genes and their function. In Human Herpesviruses: Biology, Therapy and Immunoprophylaxis. Arvin, A. M., Campadelli-Fiume, G., Mocarski, E, Moore, P.S., Roizman, B., Whitley R.J., and Yamanishi, K. Ed. Cambridge Univ. Press, pp70-92, 2007.

585. Roizman, B., and Taddeo, B. The strategy of viral replication and and takeover of the host cell. . In Human Herpesviruses: Biology, Therapy and Immunoprophylaxis. . Arvin, A. M., Campadelli-Fiume, G., Mocarski, E, Moore, P.S., Roizman, B., Whitley R.J., and Yamanishi, K. Ed. Cambridge Univ. Press, 163-173, 2007.

586. Tadeo, B., Sciortino, M.T. Zhang, W., and Roizman, B. Interaction of herpes simplex virus RNase with VP16 and VP22 is required for the accumulation of the protein but not for accumulation of mRNA. Proc. Nat Acad. Sci. USA **104**:12163-12168, 2007.

587. Skelly C.L. Amito Chandiwal A. Vosicky J.F Ralph R. Weichselbaum R.R. and Roizman, B Attenuated herpes simplex virus 1 blocks arterial apoptosis and intimal hyperplasia induced by balloon angioplasty and reduced blood flow. Proc. Nat. Acad. Sci, **104**:12474-12478 2007

588. Benetti, L., and Roizman, B. In transduced cells, the US3 protein kinase of herpes simplex 1 precludes activation and induction of apoptosis by transfected procaspase 3. J. Virol. **81**: 10242-10248, 2007.

589. Veerapong, J., Bickenbach, K.A., Shao, M., Smith K.D., Posner M.C., Roizman, B., and Weichselbaum, R.R Systemic delivery of $_{1}$34.5-deleted herpes simplex virus 1 slectively targets and treat distant human xenograft tumors that express high MEK activity. Cancer Res. **67**: 8301- 8306, 2007.

590. Sciortino, M-T., Taddeo, B., Giuffrè-Cuculletto, M., Medici M-A, Mastino A., and Roizman, B Replication competent herpes simplex virus 1 isolates selected from cells transfected with a BAC-DNA lacking solely the U_L49 gene vary with respect to the defect in the U_L41 gene encoding the host shutoff RNase. J.Virol. **81**:10924-10932, 2007.

591. Khodarev, N.N., Minn, A.J., Efimova E.V., Darga, T.E., Labay E., Beckett, M., Mauceri, H., Roizman, B., and Weichselbaum, R.R. Signal transducer and activator of transcription 1 regulates both cytotoxic and prosurvival functions in tumor cells. Cancer Research **67**: 9217-9220, 2007

592. Gu, H., and Roizman, B.Herpes simplex virus ICP0 blocks the silencing of viral DNA by dissociating HDACs from the CoREST/REST complex. Proc. Nat. Acad. Sci. (USA) **104**: 17174-17139. 2007

593. Yang, K., Poon, A.P.W., Roizman, B., and Baines J.D. Temperature-sensitive mutations in the putative herpes simplex virus 1 terminase subunits U_L15 and U_L33 preclude viral DNA cleavage/packaging and interaction with pU_L28 at the nonpermissive temperature. J. Virol. **82**:487-494, 2008

594. Kalamvoki, M., Qu, J,, abd Roizman, B. Translocation and colocalization of ICP4 and ICP0 in cells infected with herpes simplex virus 1 mutants lacking glycoprotein E, glycoprotein I or the virion host shutoff product of U_L41 gene. J. Virol. 82:1701-1713, 2008.

595. Jovasevic, V., Liang, L., and Roizman, B. Proteolytic cleavage of VP1-2 is required for the release of herpes simplex virus 1 DNA into the nucleus. J. Virol. 82:3311-2219, 2008.

596. Smith-Donald, B.A.. Durand, L.O and Roizman B. The role of cellular phosphatase cdc25C in herpes simplex virus 1 replication. J. Virol. 82:4527-4532, 2008.

597. Smith-Donald, B.A. and Roizman B.**T**he interaction of herpes simplex virus 1 regulatory protein ICP22 with the cdc25C phosphatase is enabled in vitro by viral protein kinases U_S3 and

U_L13. J. Virol. 82:4533-4543, 2008.

598. Liang, L., and Roizman, B. The expression of interferon γ dependent genes is blocked independently by the virion host shutoff RNase and by the U_S3 protein kinase. J. Virol. 82:4688-4696, 2008

Postdated. Weichselbaum R.R., Kufe, D.W., Advani S.J., and Roizman B. Molecular Tageting of gene therapy and radiotherapy. Acta Oncologica 40 735-738 2001.

Postdated Roizman, B. and Ward P.L. Simplexvirus .In ***Springer Index of viruses***, Springer verlag, Heidelberg, pp1-9 2001

Postdated. Pagano J.S., Blaser M., Buendia M-A, Domanina B, Khalili K, Raab-Traub N., Infectious agents and cancer: criteria for causal relationship. Seminas in Cancer Biology 14:453-471, 2004

Books and Monographs

1. P. Palesi and B. Roizman (Editors): **Genetic Variation of viruses**. Ann. N.Y. Acad. Sci. 354:1980.

2. B. Roizman (Editor): **Herpesviruses**, Vol. 1, Plenum Press, New York, 1982.

3. B. Roizman (Editor): **Herpesviruses,** Vol. 2, Plenum Press, New York, 1983.

4. B. Roizman (Editor): **Herpesviruses**, Vol. 3, Plenum Press, New York, 1985.

5. B. Roizman and C. Lopez (Editors): **Herpesviruses**, Vol. 4, Plenum Press, New York, 1985.

6. B.N. Fields, D.M. Knipe, R.M. Chanock, J.L. Melnick, B. Roizman and R.E. Shope (Editors): **Virology**, Raven Press, New York, 1985.

7. B.N. Fields, D.M. Knipe, R.M. Chanock, J.L. Melnick, B. Roizman and R.E. Shope (Editors): **Fundamental Virology**, Raven Press, New York, 1986. Translated into Russian, MIR Publishers, Moscow, 1989.

8. C. Lopez and B. Roizman (Editors) **Human Herpesvirus Infections: Pathogenesis, Diagnosis and Treatment.** Raven Press, New York, 1986.

9. B.N. Fields, D.M. Knipe, R.M. Chanock, M.S. Hirsch, J.L. Melnick, T. P. Monath and B. Roizman (Editors): **Virology**, 2nd Edition, Raven Press, New York, 1990.

10. C. Lopez, R. Mori, B. Roizman, and R.J. Whitley. **Immunobiology and Prophylaxis of Human Herpesvirus Infections.** Plenum Press, New York, 1990.

11. B.N. Fields, D.M. Knipe, R.M. Chanock, M.S. Hirsch, J.L. Melnick, T. P. Monath and B. Roizman (Editors): **Fundamental Virology**, 2nd Edition, Raven Press, New York, 1990.

12. B. Roizman, C. Lopez, and R. J. Whitley. The Human Herpesviruses. Raven Press, 1993.

13. B. Roizman, Ed. Proceedings of the colloquium on **Changes in human ecology and behavior: Effects on infectious diseases**. Proc. Nat Acad. Sci. USA **91** 2377-2468, 1994.

14. B. Roizman, Ed. **Infectious Diseases in an Age of Change**. National Academy of Sciences Press, 1995

15. B.N. Fields, D.M. Knipe, P. Howley, R.M. Chanock, M.S. Hirsch, J.L. Melnick, T. P. Monath, B. Roizman. and Stephen E. Straus, Editors Fields' **Virology** 3rd Edition, Lippincott-Raven Press, Philadelphia

PA. 1996.

16., B.N. Fields, D.M. Knipe, P. Howley, R.M. Chanock, J.L. Melnick, T. P. Monath, B. Roizman, and Stephen E. Straus, Editors, **Fundamental Virology** 3rd Edition Lippincott-Raven Press, Philadelphia PA. 1996.

17. B. Roizman and P. Palese, P. Poceedings of the colloquium on **Genetic engineering of viruses and virus vectors**. Proc. Nat. Acad. Sci. USA **93:**11287-11425, 1996

18. D.M. Knipe, P. Howley, M.S. Hirsch, T. P. Monath and B. Roizman, Editors, **. Fields' Virology 4rd Edition,** Lippincott-Raven Press, New York, N.Y.2001

19.. D.M. Knipe, P. Howley, M.S. Hirsch, T. P. Monath and B. Roizman, Editors **Funadmental Virology, 4th edition**, Lippincott-Raven Press, New York, N.Y.2001

20. D.M. Knipe, P. Howley, D. E. Griffin, R. A. Lamb, M. A. Martin, B. Roizman, and S. E. Straus, **Fields' Virology 5rd Edition,** , Lippincott-Williams and Wilkins, New York, N.Y, , 2007.

21. A. M. Arvin, G.Campadelli-Fiume, B. Roizman, R.J., Whitley and K. Yamanishi. Eds **Human Herpesviruses: Biology, Therapy and Immunoprophylaxis..** Cambridge Univ. Press, NY, 2007,

Miscellaneous publications

Signed.

Roizman, B. Scientific Literacy. Commencement address, Governor's State University, June 30, 1984. In G.S.U. Landscapes, Vol. IV., No. 1, July 9, 1984.

Roizman, B. Description of Field of Virology, Petersen's Guides, 1983 - Roizman, B. Molecular and Genetic Engineering: The Principles, the Power, and the Promises. In: Science Guide to Biotechnology, Products and Instruments; Guide to Instruments, vol. 239 Part II, page G110, 1988.

Roizman B. Travels of a Peripatetic Scientist in Japan: A Foreigner's View of Science and Scientists in Japan. Newsletter No. 3, Japan Society for the Promotion of Science, Tokyo, Japan, 1989.

Roizman, B. The second 50 years. In: Sexually Transmitted Diseases - a Centennial Prospective, Edited by I.K. Mushahwar, Abbott Laboratories, pp. 27-30, 1989.

Roizman B., Hughes, J. M. The effects of changes in human ecology and behavior on infectious diseases: an introduction. Proc. Nat. Acad. Sci. **91**:2377, 1994.

Roizman, B. and Spear P.G. Current Frontiers in Virology (Editorial). Infectious Agents and Disease, **3**:53, 1994.

Roizman, B., Joklik, J., Fields B., Moss, B. The Destruction of Smallpox Virus Stocks in National Repositories: a grave mistake and a bad precedent (Editorial). Infectious Agents and Disease, **5** 215-217, 1994.

Roizman, B. New viral footprints in Kaposi's Sarcoma. (Editorial) New England J. Med. **332**:1227-1228, 1995.

Palese, P. and Roizman, B. Genetic engineering of viruses and virus vectors: A preface. Proc. Nat Acad. Sci. USA. **93**:11,287, 1996

Roizman, B. Herpes simplex viruses: Our lifetime Unwanted Guests and a String of Pearls. The 1998 Nora and Edward Ryerson Lecture. The University of Chicago Record, **32** (4) 4-6, 1998

Roizman B. Redefining Virology. Sciences' compass Science 288 2327-2328, 2000

Roziman B. Foreword: From Foe to Friend: in Viral Vectors: Basic Science and Gene Therapy edited by A.C-d Arregui and A. Garcia Carranca Eaton Publishing page XI, Natick MA. 2000

Book Review: Ahead of the curve: David Baltimore's life in Science. Perspectives in biology and medicine, 45294-296, 2002

Group Effort (Unsigned)

A WHO Meeting. Prevention and control of herpesvirus diseases. Part 1. Clinical nd laboratory diagnosis and chemotherapy. Bulletin of the World Health Organization, 63:185-201, 1985.

A WHO Meeting. Prevention and control of herpesvirus diseases. Part 2. Epidemiology and Immunology. Bulletin of the World Health Organization, 63:427-444, 1985.

New Vaccine Development. Establishing of Priorities: Volume 1. Diseases of importance in the United States. National Academy Press, Washington, D.C., 1985.

New Vaccine Development. Establishing of Priorities: Volume II. Diseases of importance in the Developing Countries. National Academy Press, Washington, D.C., 1986

Former Trainees and Associates

Name	Training Period	Graduate Education Degree	Year	Institution	Present position
Predoctoral					
Laure Aurelian Baltimore Md	1962-65	Ph.D.	1966	Johns Hopkins	Prof. Depart. of Pharm., Univ. Maryland Med. School,
Steven Bachenheimer Carolina, Chapel Hill, N.C.	1967-72	Ph.D.	1972	U. of Chicago	Prof. Depart. of Microbiol. and Immunol. Univ. N.
William Batterson	1974-84	Ph.D.	1981	U. Of Chicago	Microbiol. U. Texas-Houston
Daniel Braun	1981-83	Ph.D. M.D. 1979	1983	U. Of Chicago U. Michigan	Staff Physician, Elli Lily and Co. Indianapolis IN.
Timothy Buchman St Louis.	1975-78	Ph.D. M.D. 1980	1978	U. of Chicago U. of Chivago	Prof. Surg., Dir. Critical Care & Burn unit. Wash. Univ.
Kara Carter	1990-96	Ph.D,	1996	U. of Chicago	Associate Director, Genzyme Corp.
Chang, Y-E	1991-96	Ph.D,	1996	U. of Chicago	Lawyer
Ana Chee	1997-03	Pb.D.	2003	U. of Chicago	Research Associate Northwestern Univ. Med. School.
Joanie Chou	1983-86	Ph.D.	1986	U. of Chicago	President, Akure Inc. Chicago Il.
Lizette Durand	2002-07	Ph.D.	2007	U. of Chicago	Research Associate, Univ of Chicago
Randall Fawl	1987-93	Ph.D.	1993	U. of Chicago	Wistar Inst., Univ of Penna.
Niza Frenkel	1969-72	Ph.D.	1972	U. of Chicago	Prof. University of Tel Aviv, Israel
Deidre Furlong	1978-81	Ph.D.	1975	U. of Chicago	Research Assoc. Harvard Med. School, Boston, Mass.
Veronica Galvan	1994-99	Ph.D.	1999	U. Chicago	Postdoc. Buck Center for Aging, CA
Wade Gibson Baltimore Md.	1967-72	Ph.D.	1973	U. of Chicago	Professor, Dept. of Pharm. Johns Hopkins Med. School.
Ryan Hagglund	1999-03	Ph.D.	2003	U. of Chicago	UC Law School
David Hoggan	1956-59	Sc.D.	1959	Johns Hopkins	Staff Scientist, NIAID
Jeff Hubenthal-Voss	1983-88	Ph.D.	1988	U. Washington	Senior Scientist, BASF Bioresearch, Cambridge, MA.
Paola Jones	1972-79	Ph.D.	1979	U. of Chicago	Research Assoc. Ben May Institute, Univ. of Chicago
Elliott Kieff Harvard Med. School	1966-71	Ph.D. M.D. 1966	1971	U. of Chicago	Prof., Dep. of Medicine and Microb. & Mol. Gen., J. Hopkins
Thomas Kristie	1981-86	Ph.D.	1986	U. of Chicago	Research Scientist (tenured) NIAID
Michael Lagunoff	1989-95	Ph.D.	1995	U. of Chicago	Assoc. Prof. University of Washington (WA)
Yu Liang	1999-05	Ph.D,	2005	U. Chicago.	Post Doctoral Trainedd, NIH.
Fenyong Liu	1988-92	Ph.D.	1993	U. of Chicago	Prof. UC Berkeley
Richard Longnecker Il.	1982-88	Ph.D.	1987	U. of Chicago	Prof. Microbiology Northwestern Med. School. Chicago
Susan Mackem	1976-82	Ph.D.	1982	U. of Chicago	Senior Clinical Investigator, Laboratory of

Pathology, NCI,			M.D. 1984 Johns Hopkins		
Nancy Michael	1986-93	Ph.D.	1993	U. of Chicago	Res. Associate, University of Chicago (Deceased).
Louise McCormick	1989-96	Ph.D.	1996	U. of Cicago	Res. Assoc. Asist Prof. Emory Med. School
Vincent Morris	1966-69	Ph.D.	1969	U. of Chicago	Prof., Univ. W. Ontario, Canada
Lawrence Morse	1975-77	Ph.D.	1978	U. of Chicago	Prof. of Opthalmology, U.C. California, Davis.
	M.D.1982 UCLA				
Joashua Munger	1996-01	Ph.D.	2001	U.of Chicago	Assistant Professor, Univ. of Rochester
William Ogle	1992-98	Ph.D	1998	U. of Chicago	Assist. Prof. University of Florida. Gainsville.
Phillip Pellett	1981-85	Ph.D.	1985	U. of Chicago	Prof.. Wayne State Med. School
Kim Poffenberger	1979-84	Ph.D.	1984	U. of Chicago	Staff Scientist, Fed. Drug Administration
Glenn Randall	1993-99	Ph.D.	1999	U. of Chicago	Assist. Professor, University of Chicago.
Charles Van Sant	1994-00	Ph.D.	2000	U. of Chicago	Scientist, Abbott Laboreatories
Amy E. Sears	1978-85	Ph.D.	1985	U. of Chicago	Assoc. Member, Tampa Bay Rsearch Inst. St Petersburg.
FL					
Jerome Schwartz	1966-69	Ph.D.	1969	U. of Chicago	Vice Pres/Med Direct., Applied Clinical
Communications, Inc.	Parsippany, NJ.				
Sandra Silver	1980-85	Ph.D.	1985	U. of Chicago	Senior Scientist, Repligen Corp.
Benjamin Smith-Donald	2001-06 Ph.D.		2006	U. of Chicago	MSTP Program
David, Spector,	1988-91	Ph.D.	1991	U. of Chicago	Oncology practice, Quad city Iowa
		M.D., 1993 U. of Chicago.			
Patricia G. Spear	1965-69	Ph.D.	1969	U. of Chicago	Prof. & Former Chair, Dept of Microbiol., Northwestern
Med. School, Chicago					
Susan Spring	1964-69	Ph.D.	1969	U. of Chicago	Program Director, NCI
Samuel Wadsworth	1970-74	Ph.D.	1974	U. of Chicago	Vice President, Molecular Biology, Genzyme Corp.

<u>Postdoctoral</u>

Mathias Ackermann	1983-85 DVM		1982	U. Zurich,	Professor, Swiss Inst. Virol. Zurich Switzerland
Minas Arsenakis	1985-87	Sc.D.	1985	LaTrobe U.	Professor, Dept. of Biology, U. of Thessaloniki, Greece
	Australia				
Joel Baines,	1989-93	Ph.D.	1989	Cornell Univ.	Professor, Microbiol., Cornel. Univ. Ithaca N.Y
		DVM			
John Blaho	1989-94	Ph.D.	1989	U. of Alabama	Head, Virology Division, Medican Diagnostic Lab.
					Hamilton NJ.
Renato Brandimarti	1993-99	Ph.D.	1993	U. Bologna	Assist. Professor, Univ, of Bologna Italy.
Renato Bruni	1993-98	Ph.D.	1993	U. of Zurich, Sw.	Scientist, Tribeca, N.Y.
Kevin Cassady	1995-98	M.D.			Assist Prof. of Pediatrics, Univ of Ala. Birmingham
Enzo Cassai	1971-72	Ph.D.	1970	U. of Ferrara	Prof. Microbiol. Univ. of Ferrara, Italy
Anthony Conley	1977-80	Ph.D.	1977	Michigan State	Senior Scientist, Merck, PA

Esclatine, Audrey	2000-03	Ph.D.	Univ of Paris,		Assist Prof. Univ of Paris.
Fineschi, Beatrice.	1997-01	Ph.D.	1997	Univ. of Chicago	Instructor, Univ. of Chicago.
Gary Hayward	1974-76	Ph.D.	1972	Auckland, NZ	Prof. Pharmacol, Med. School. Johns Hopkins
Bin He	1994-98	Ph.D.	1993	Purdue Univ.	Assoc. Prof. Univ. of Il Med. School Chicago IL
Carolyn Herz	1981-82	Ph.D.	1981	Cornell U.	Res. Assoc. Walther Oncology Center, Ind.
Robert Honess .	1972-75	Ph.D.	1972	Birmingham,	Head, Div. Virol. NIMR, MRC, London, UK (Deceased)
Kazuhiko Igarashi	1991-93	Ph.D.	1991	Tohoku Univ.	Prof. Depart. of Biochem. Univ. of Hiroshima School of
		M.D.			Med. Japan
Yasushi Kawaguchi	1995-97	Ph.D	1994	U. of Tokyo	Assoc. Prof. Tokyo University, Japan
		DVM	1991	U. of Tokyo	
Robert Jacob	1976-79	Ph.D	1975	Syracuse U.	Assoc. Prof. Microbiol., Univ. of Kentuky Med. School,
					Lexington, KY.
Bernard Jacquemont	1972-74	Ph.D.	1971	U. Claude	Sr. Sci. INSERM, Lyon, Bernard-Lyon France
Frank J. Jenkins	1984-87	Ph.D.	1984	Penn State	Assoc. Prof. Univ of Pittsburg Med.
John Keller	1968-70	Ph.D.	1966	M.I.T.	Prof. Biochemistry Univ. of Health Sci., North Chicago Il.
Robert King	1990-92	Ph.D.	1990	Purdue Univ.	Research Director, Dow Chemical.
Marilyn Kozak	1972-74	Ph.D.	1972	Johns Hopkins	Prof. Biochem., Rutgers University
David Knipe	1976-79	Ph.D.	1976	M.I.T.	Prof. Microbiology & Mol. Genetics, Harvard Med. Sch.
Rosario Leopardi	1994-98	Ph.D.	1994	Univ. of Turku Finland	
		P.D.	1990	Catania Italy	Assist. Prof. Karolinska Univ. Sweden
Sandra LeMaster	1979-80	Ph.D.	1978	U. of Penn.	Research Assoc. Microbiology, U. of Cincinnati
Markovitz, Nancy	1994-00	Ph.D.	1994	U. of Texas Austin	Staff Scientist FDA
P. Mavromara-Nazos	1979-84	Ph.D.	1984	U. of Michigan	Senior Member, Pasteur Inst., Athens, Greece
Robert Millette	1973-75	Ph.D.	1964	Cal. Tech	Prof. of Biology, U. of Oregon
Edward Mocarski	1979-83	Ph.D.	1979	U. of Iowa	Professor, Emory Univ Atlanta GA.
Terese Ng	1991-97	Ph.D	1991	U. of Iowa	Res. Scientist, Abbott Labs
Leonore Pereira	1974-77	Ph.D.	1974	U. of Frankfort	Prof. Univ of California San Francisco.
Sofia Perazzo	1997-99	M.D.	1997	U. of Buenos Aires	Resident, U. of Buenos Aires
Leonard Post	1979-81	Ph.D.	1979	U. of Wisc.	Vice President for Research, Onyx Inc. California.
Frances C. Purves	1988-93	Ph.D.	1986	U. of Glasgow,	Res. Scientist Tularek Inc. S. San Francisco, CA.
Roller J. Roller	1989-94	Ph.D.	1989	Harvard	Prof., Med. Microbiology, Univ. of Iowa.
M. G. Romanelli	1988-90	Ph.D.	1985	U. of Ferrara	Assoc. Prof. of Genetics, University of Verona. Italy
William Ruyechan	1976-78	Ph.D.	1975	U. Ill-Urbana	Prof. Biochem., University of N.Y. at Buffalo
Sciortino, M.T.	1997-01	Ph.D,	1997	U. of Messina	Assist. Prof. U. of Messina, Italy.
Saul Silverstein	1971-74	Ph.D.	1971	U. of Florida	Prof. & Chair, Microbiol., P&S, Columbia Univ.
Mikiko Suzuki	2000-04	DDS	1994	Tokyo Med Univ.	Assist. Prof. Toyama Med. & Pharm Univ. Toyama Japan
		Ph.D.	1998	Tokyo Med Univ.	
Robert Sydiskis	1965-67	Ph.D.	1965	Northwestern	Prof. of Microbiology, Univ. Maryland Med. School.
Enrique Tabares	1977	Ph.D.	1972	U. of Madrid	Prof. Microbiology, Med. Sch. U. Autonoma, Madrid

Mauro Tognon	1977-80	Ph.D.	1975 U. of Ferrara	Prof. Applied Biol. Univ. of Ferrara, Italy
Trgovcic Joanne.	1998-02	Ph.D.	1994 U. N. Carolina	Assist. Prof. of Pathology, Ohio State Univ.
Edward K. Wagner	1967-70	Ph.D.	1967 M.I.T.	Prof. of Molecular Biology, UC – Irvine (Deceased)
Patricia L. Ward	1985-99	Ph.D.	1985 U. of Chicago	Staff member, Museum of Science and Industry, Cbicago
Kent Wilcox	1975-79	Ph.D.	1974 Johns Hopkins	Assoc. Prof. of Microbiology, Univ. Wisc. Milwaukee
Hanns Wolf	1975-77	Ph.D.	1974 U. Erlangen,	Prof. and Dir. Inst. for Med. Microbiology, Regensburg Univ., Germany
Manfred Wolff	1973-76	Ph.D.	1973 U. Bonn, WG	Prof. Inst. fur Virologie and Microbiologie, Universitat Witten/Herdecke
Guo-Jie Ye Gainsville FL.	1996-01	Ph.D.	1994 China	Associate Director, Applied Genetic Technologies Corp.

Visiting Scientists (Past)

Michael Fenwick, Ph.D. Sabbatical Reader, Unv. Oxford, England

G. Campadelli-Fiume, Ph.D. Sabbatical Prof. of Virol. Univ. of Bologna Italy

Ian Halliburton, Ph.D. Sabbatical Reader, Department of Microbiology, University of Leeds, UK

Tao Hung M.D. Sabbatical Professor, Chinese Academy of Preventive Medicine, Beijing.

Veijo Hukkannen Sabbatical Univ of Turkku, Finland

Alex Kohn, Ph.D. Sabbatical Professor, Univ. of Tel-Aviv Med. School

Augustine Hajime Koyama, D.Sc. Sabbatical Prof. of Virology, Wakayama Medical University, Wakayama, Japan

Bodil Norrild, Ph.D. Sabbatical Associate. Prof. of Microbiology Univ of Copenhagen Denmark

Filatov, Felix, Ph.D. Visiting Scientist; Member, Ivanovsky Institute for Virology, Russian (USSR) Academy of Sciences, Moscow.

Benito Reguero M.D. Sabbatical Professor and Chairman, Department of Microbiology, the University of Santiago de Campostela, Spain. (Sabbatical leave 1/93 to 12/93).

Markert, James M.D. Visitng Assist Prof. of Neurosurgery, Univ of Alabama 9/95-4/96

Allessandra Stefan, Sc.D. Visting Scientist, University of Bologna, Italy; Fall 1997.

Yugi Isegawa M.D. Sabbatical Assist. Prof. Microbiology, Univ of Osaka Japan, Jam-Nov 1997

Wang, Janwei, Visiting Scientist, Associate Professor, Institute for Virology Beijing 8-11/2002

Special Fellows:

Bradford S. McGwire Howard Hughes Medical Student Fellow 1989-1990